HITACHI

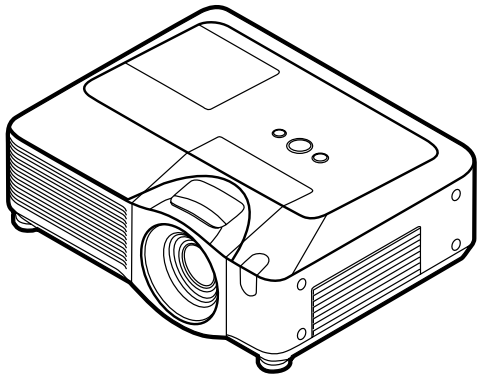
YK | No.0577E

SERVICE MANUAL

CP-X505(EDX35N)

⚠ Warning

The technical information and parts shown in this manual are not to be used for: the development, design, production, storage or use of nuclear, chemical, biological or missile weapons or other weapons of mass destruction; or military purposes; or purposes that endanger global safety and peace. Moreover, do not sell, give, or export these items, or grant permission for use to parties with such objectives. Forward all inquiries to Hitachi Ltd.



Caution

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Hitachi Multimedia LCD Projector. Be sure to read cautionary items described in the manual to maintain safety before servicing.

Service Warning

1. When replace the lamp, to avoid burns to your fingers. The lamp becomes too hot.
2. Never touch the lamp bulb with a finger or anything else. Never drop it or give it a shock. They may cause bursting of the bulb.
3. This projector is provided with a high voltage circuit for the lamp. Do not touch the electric parts of power unit (circuit) and power unit (ballast), after turn on the projector.
4. Do not touch the exhaust fan, during operation.
5. The LCD module assembly is likely to be damaged. If replacing to the LCD LENS/PRISM assembly, do not hold the FPC of the LCD module assembly.
6. Use the cables which are included with the projector or specified.

Contents

1. Features ---- 2
2. Specifications ---- 2
3. Names of each part ---- 3
4. Adjustment ---- 6
5. Troubleshooting ---- 13
6. Service points ---- 20
7. Wiring diagram ---- 38
8. Disassembly diagram ---- 49
9. Replacement parts list ---- 58
10. RS-232C communication ---- 59
11. Block diagram ---- 72
12. Connector connection diagram ---- 73
13. Basic circuit diagram ---- 74

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

Multimedia LCD Projector

September 2006

1. Features

- High Brightness
- Compact Body
- Low Noise
- Remote Control Via Your Web Browser
- Rich Connectivity

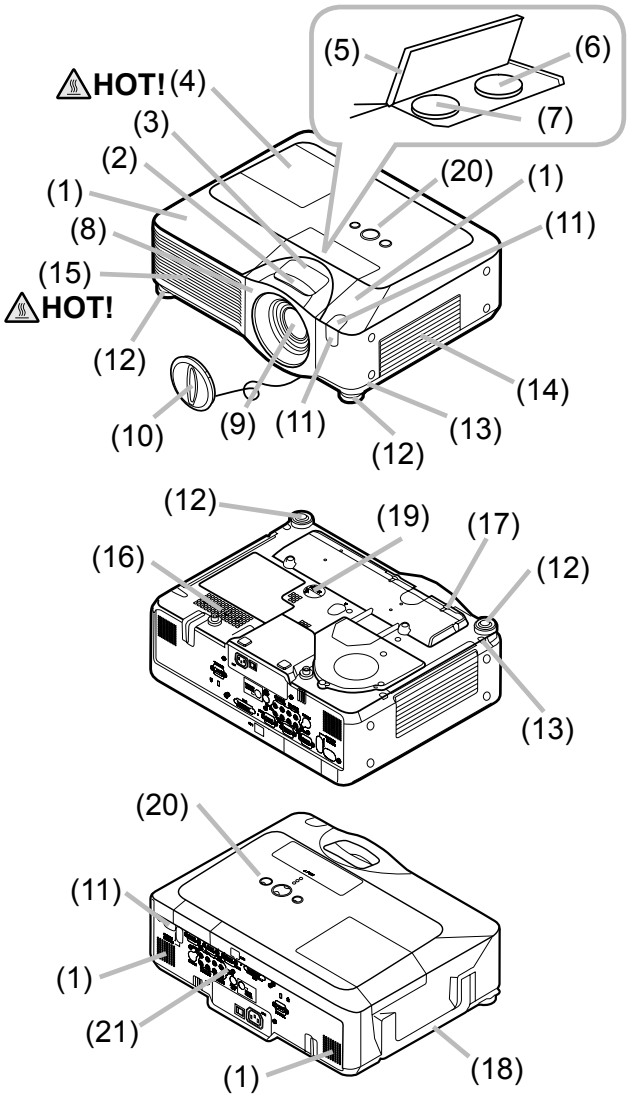
2. Specifications

Liquid crystal panel	Drive system		TFT active matrix
	Panel size		20mm(0.79 type)
	Number of pixels		1024 (H) x 768 (V)
Lamp			285W UHB
Digital signal	M1-D		Type:T.M.D.S Amplitude differential signal : DC : 150~1200mV AC : 1.56Vp-p
RGB signal	RGB IN	1	Video : Analog 0.7Vp-p(75Ω termination) H/V. sync. : TTL level (positive/negative) Composite sync. : TTL level
		2	
	RGB OUT		Video:Analog 0.7Vp-p, 75Ω output impedance (positive) H/V. sync.: TTL level (positive/negative) Composite sync.: TTL level
VIDEO signal	VIDEO IN		1.0Vp-p (75Ω termination)
	S-VIDEO IN		Y signal: 1.0±0.1Vp-p, (75Ω termination) C signal: 0.286±0.1Vp-p (NTSC burst signal, 75Ω termination) 0.3±0.1Vp-p (PAL/SECAM burst signal, 75Ω termination)
	COMPONENT VIDEO	Y	1.0±0.1Vp-p, 75Ω termination (positive)
		C_B/P_B	0.7±0.1Vp-p, 75Ω termination (positive)
		C_R/P_R	0.7±0.1Vp-p, 75Ω termination (positive)
AUDIO signal	AUDIO IN 1		500mVrms, 47kΩ or more (max. 2Vrms)
	AUDIO IN 2		
	AUDIO IN 3/4 L/R		500mVrms, 47kΩ or more (max. 2Vrms)
	AUDIO OUT		0~500mVrms, output impedance 1kΩ (max. 2Vrms)
Speaker output			4W x 4
Power supply			AC100~120V/5.0A, AC220~240V/2.1A
Power consumption			460W
Dimensions			418 (W) x 139 (H) x 319 (D) mm (Not including protruding parts)
Weight			7.1kg
Temperature range			Operation : 5~35°C Storage : -20~60°C
Accessories			Remote control x1 RGB cable x 1 Power cords x 3 Batteries x 2 User's manuals x 1 LENS CAP x 1

3. Names of each part

● Projector

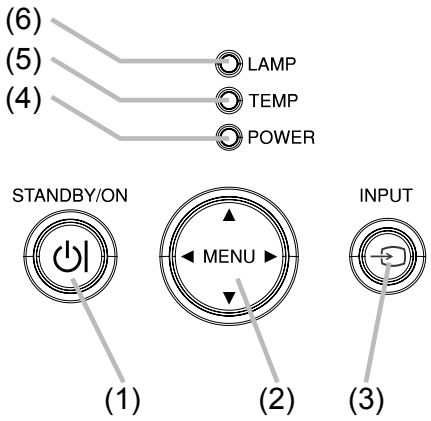
(1) Speakers (x 4)
(2) Focus ring
(3) Zoom ring
(4) Lamp cover
The lamp unit is inside.
(5) Lens shift cover
(6) Horizontal lens shift dial
(7) Vertical lens shift dial
(8) Front cover
(9) Lens
(10) Lens cover
(11) Remote sensors (x 3)
(12) Elevator feet (x 2)
(13) Elevator knobs (x 2)
(14) Filter cover
The air filter and intake vent are inside.
(15) Exhaust vents
(16) Intake vents
(17) Rivet hole
(18) Handle
(19) Battery cover
(20) Control panel
(21) Rear panel



⚠**WARNING** ►**HOT!** : Do not touch around the lamp cover and the exhaust vents during use or just after use, since it is too hot.
►Do not look into the lens or vents while the lamp is on, since the strong light is not good for your eyes.
►Do not grab the front cover to hold the projector up, since the projector may drop down.
►Do not handle the elevator knobs without holding the projector, since the projector may drop down.
⚠**CAUTION** ►Maintain normal ventilation to prevent the projector from heating up. Do not cover, block or plug up the vents. Do not place anything that can stick or be sucked to the vents, around the intake vents. Clean the air filter periodically.

Control panel

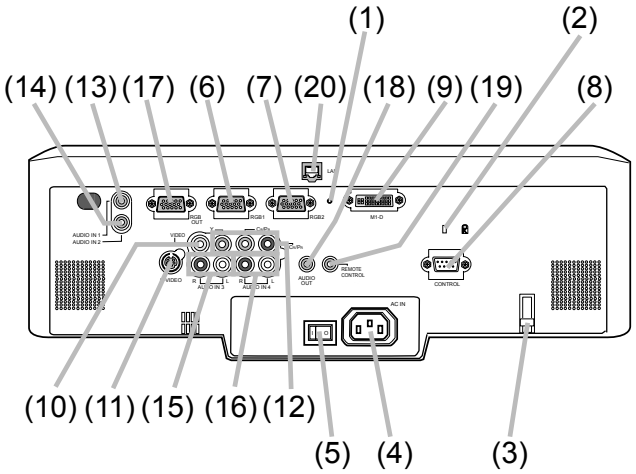
(1) STANDBY/ON button
(2) MENU button
    It consists of four cursor buttons.
(3) INPUT button
(4) POWER indicator
(5) TEMP indicator
(6) LAMP indicator



Rear panel

(1) Shutdown switch
(2) Security slot
(3) Security bar
(4) AC inlet
(5) Power switch

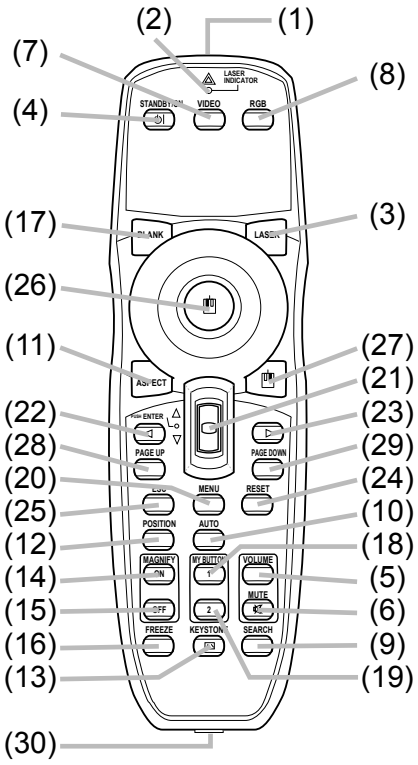
(6) RGB1 port
(7) RGB2 port
(8) CONTROL port
(9) M1-D port
(10) VIDEO port
(11) S-VIDEO port
(12) COMPONENT
    (Y, C_B/P_B, C_R/P_R) ports
(13) AUDIO IN1 port
(14) AUDIO IN2 port
(15) AUDIO IN3 (R/L) ports
(16) AUDIO IN4 (R/L) ports
(17) RGB OUT port
(18) AUDIO OUT port
(19) REMOTE CONTROL port
(20) LAN port



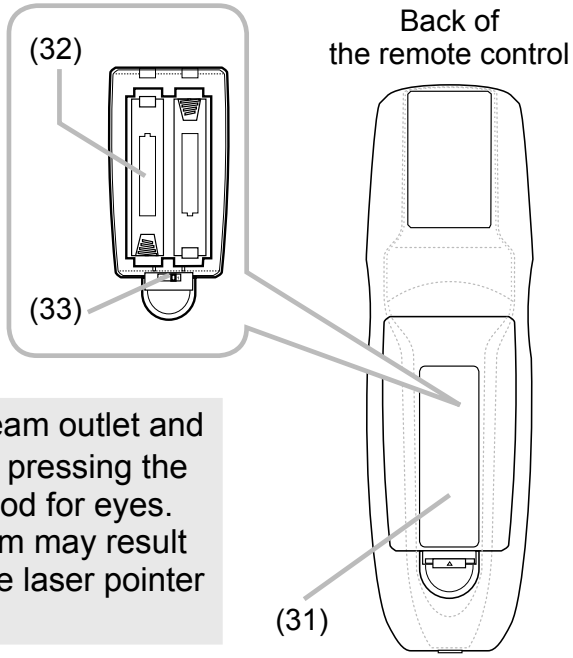
⚠**CAUTION** ►Do not use the security bar and the security slot to prevent the projector from falling down, since it is not designed for it.

►Use the shutdown switch only when the projector is not turned off by normal procedure, since pushing this switch stops operation of the projector without cooling it down.

Remote control



(1) Laser pointer
It is a beam outlet.
(2) LASER INDICATOR
(3) LASER button
(4) STANDBY/ON button
(5) VOLUME button
(6) MUTE button
(7) VIDEO button
(8) RGB button
(9) SEARCH button
(10) AUTO button
(11) ASPECT button
(12) POSITION button
(13) KEYSTONE button
(14) MAGNIFY - ON button
(15) MAGNIFY - OFF button
(16) FREEZE button
(17) BLANK button
(18) MY BUTTON - 1 button
(19) MY BUTTON - 2 button
(20) MENU button
(21) Lever switch : acting 3 functions as below.
Cursor button ▲ : to slide toward the side marked ▲.
Cursor button ▼ : to slide toward the side marked ▼.
ENTER button : to push down the center point.
(22) Cursor button ◄
(23) Cursor button ►
(24) RESET button
(25) ESC button
(26) Mouse left button
(27) Mouse right button
(28) PAGE UP button
(29) PAGE DOWN button
(30) Wired remote control port
(31) Battery cover
(32) Battery holder
(33) Frequency switch



⚠**WARNING** ►Do not look into the beam outlet and point the beam at people and pets while pressing the LASER button, since the beam is not good for eyes.
⚠**CAUTION** ►Note that the laser beam may result in hazardous radiation exposure. Use the laser pointer only for pointing on the screen.

4. Adjustment

4-1 Before adjusting

4-1-1 Selection of adjustment

When any parts in the table 4-1 are changed, choose the proper adjusting items with the chart.

Table 4-1: Relation between the replaced part and adjustment

Replaced part	Adjustment					
	Flicker (Chap.4-2)	Ghost (Chap.4-3)	DC OFF (Chap.4-4)	E-POS (Chap.4-5)	White balance (Chap.4-6)	Color uniformity (Chap.4-7)
Dichroic optics unit	○	○	△	△	△	△
LCD/LENS prism assembly	○	○	○	○	○	○
PWB assembly Main	○	○	○	○	○	○
Lamp unit assembly	△	△	×	×	△	△

○ : means need for adjustment. × : means not need for adjustment.
△ : means recommended.

4-1-2 Setting of condition before adjustments

1. Before starting adjustments, warm up projector for about 10 minutes.
   Turn off the automatic keystone function in OPTION Menu.
   If you changed [AUTO KEYSTONE] from [TURN ON] to [TURN OFF], set to the [TURN ON] after adjustment.
2. Set Zoom Wide to Max. And project an image with more than 1m (40 inches) in diagonal size.
3. Set the lens position to the center, using horizontal and vertical lens shift dials.
4. Normalizing the video adjustments
   Press the [MENU] button to display the EASY menu. If Advanced menu comes up, move to the Easy menu.
   Select the RESET in the EASY menu and press the [▶] or [ENTER] button to open the RESET dialog. Choose the EXECUTE with the [▲] button.
   Note that the projector will not allow you to reset its adjustment values with no signal input.
5. Perform all adjustments from the FACTORY MENU. Operate as follows to display the FACTORY MENU.
   When you use the remote control...
   a. Press the [MENU] button of the remote control to display the Easy menu. (If the Advanced menu appears, move to the Easy menu.)
   b. Select the RESET in the Easy menu, and then press the [▶] or [ENTER] button.
   c. Next, press the [RESET] button one time. And hold the [RESET] button for 3 seconds or longer (the FACTORY MENU will appear).
   When you use the keypad of the projector...
   a. Press the [▲], [▼], [◀] or [▶] button of the projector to display the Easy menu. (If the Advanced menu appears, move to the Easy menu.)
   b. Select the RESET in the Easy menu, and then press the [▶] or [ENTER] button.
   c. Next, press the [▼] button one time. And repress and hold the [▼] button together with the [INPUT] button for 3 seconds or more (the FACTORY MENU will appear).

4-2 Flicker adjustment (V.COM adjustment)

Test pattern for the adjustment

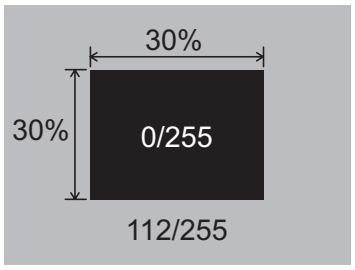
Adjustment procedure

1. Use DAC-P - V.COM - R: in the FACTORY MENU to adjust so that the flicker at the center of the screen is less than the flicker at the periphery. (When the flicker is about the same across the whole screen, adjust so that the flicker at the center of the screen is somewhat less than elsewhere.)
2. In the same way, use DAC-P - V.COM-G: in the FACTORY MENU to adjust the G color flicker.
3. In the same way, use DAC-P - V.COM-B: in the FACTORY MENU to adjust the B color flicker.

NOTE: The test pattern shown on the left sometimes has a horizontal line across the screen.

4-3 Ghost adjustment

Test pattern for the adjustment

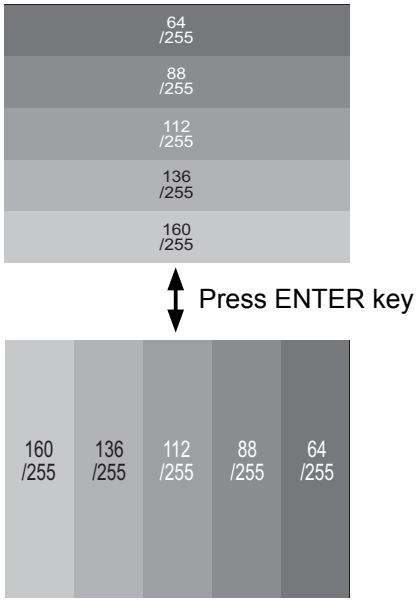


Adjustment procedure

1. Make this adjustment after completing the adjustment in the section 4-2.
   Set 0 to the GHOST R, G, B in OPTION-SERVICE-GHOST Menu.
2. Use DAC-P - GHOST - R: in the FACTORY MENU to adjust so that R color ghost is at a minimum. (Set the adjustment value to default, and then raise the value. When a ghost appears to the left of a vertical line, reduce the value by 6 steps.)
3. In the same way, use DAC-P - GHOST-G: in the FACTORY MENU to adjust so that G color ghost is at a minimum.
4. In the same way, use DAC-P - GHOST-B: in the FACTORY MENU to adjust so that B color ghost is at a minimum.

4-4 DC OFF adjustment (vertical bars adjustment 1)

Test pattern for the adjustment



Adjustment procedure

1. Make this adjustment after completing the adjustment in the section 4-3.
2. Use STRIPE - DCOFF - No. 0 - R : in the FACTORY MENU and use it so that vertical bars are minimized.
3. In the same way, use STRIPE - DCOFF - No. 0 - G : in the FACTORY MENU and use it so that vertical bars are minimized.
4. In the same way, use STRIPE - DCOFF - No. 0 - B : in the FACTORY MENU and use it so that vertical bars are minimized.

4-5 E-POS adjustment (vertical bars adjustment 2)

Test pattern for the adjustment

Adjustment procedure

1. Make this adjustment after completing the adjustment in the section 4-4.
2. Use DAC -P - E-POS - R in the FACTORY MENU and use it so that vertical bars are minimized.
3. In the same way, select DAC-P - E-POS - G and use it so that vertical bars are minimized.
4. In the same way, select DAC-P - E-POS - B and use it so that vertical bars are minimized.

4-6 White balance adjustment (visual inspection)

Preparations

1. Perform these adjustments after the adjustments described in Section 4-5.
2. Reset gamma correction before adjustment.
   - Place the cursor on [GAMMA] in the FACTORY MENU, press the [RESET] key and select RESET.

Adjustment procedure

1. First, adjust the G color.
2. Select GAMMA, SUB-CNT, and G: in the FACTORY MENU. If the background is white solid, press the [ENTER] key on the Remote control transmitter to change to [G] monochrome in the 33-tone grayscale.
3. Adjust GAMMA, SUB-CNT, and G: in the FACTORY MENU so that brightness of 33 steps is best.
4. Don't adjust GAMMA, SUB-BRT, and G: in the FACTORY MENU because we want to keep the best contrast ratio.
5. Then adjust colors R and B.
6. Select GAMMA, SUB-CNT, and G: in the FACTORY MENU. If the background is white solid, press the [ENTER] key on the remote control to change to [W] monochrome in the 33-tone grayscale.
7. Adjust GAMMA, SUB-BRT, R: and B: in the FACTORY MENU so that low-brightness white balance is best.
8. Adjust GAMMA, SUB-CNT, R: and B: in the FACTORY MENU so that middle-brightness white balance is best.
9. Repeat steps 7 to 8 above, and adjust so that brightness white balance of 33 steps is best.

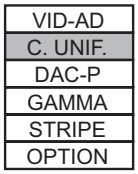
4-7 Color uniformity adjustments

Preparations

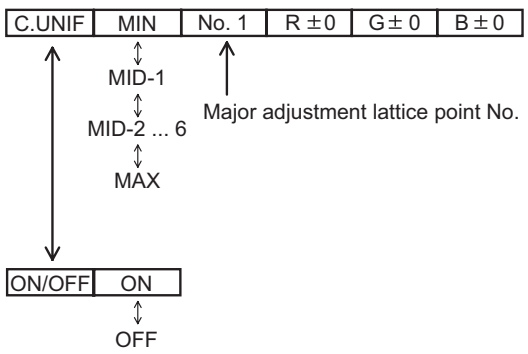
1. Perform these adjustments after the adjustments described in the section 4-6.
2. Make a color uniformity adjustments for the following tones.
   - MIN tone (approx. 7% input signal)
   - MID-1 tone (approx. 14% input signal)
   - MID-2 tone (approx. 21% input signal)
   - MID-3 tone (approx. 29% input signal)
   - MID-4 tone (approx. 36% input signal)
   - MID-5 tone (approx. 50% input signal)
   - MID-6 tone (approx. 61% input signal)
   - MAX tone (approx. 75% input signal)

   NOTE: The brightness level of the test patterns in MID-4 and MID-6 is selectable.
3. Select the [C.UNIF.] in the FACTORY MENU and press the [▶] key. This operation displays the Adjust Tone menu (shown below) on the bottom of the screen.
   To choose the tone to be adjusted, press the [▶] key and then use the [▲] or [▼] key.
   Select the major adjustment lattice point No. and color, and then adjust them.
4. The major adjustment lattice point numbers (a total of 17 points) corresponds to the major adjustment lattice point positions in the diagram on the right. The color uniformity of the entire screen can be adjusted by adjusting the white balance for each of the points starting in order from the low numbers.
5. Adjustment point No.1 should not be adjusted, because it controls the brightness of the entire screen.
6. To temporarily turn correction off, place the cursor on [C.UNIF.] in the Adjust Tone menu and press the [▼] key. The ON/OFF menu appears. Place the cursor on [ON] with the [▶] key and press the [▼] key. To turn it on again, place the cursor on [OFF] and press the [▲] key.
7. Although this adjustment can also be made using internal signals, we will here use the [ENTER] key on the remote control to select the following two signals.
   - Solid monochrome adjustment color (use G color adjustment when a color differential meter is used).
   - Solid white (use for adjustment other than above).
8. Reset color-shading correction before adjustment.
   - When resetting all values of 8 tones and all colors, place the cursor on [C.UNIF.] in the FACTORY MENU, press the [RESET] key and select RESET in the dialog.
   - When resetting only 1 tone, place the cursor on the tone such as MID-1 to be reset, press the [RESET] key and select RESET in the dialog.
   - Single tone and monochrome resets cannot be performed.

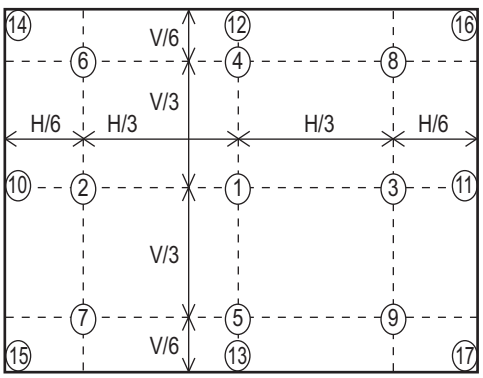
FACTORY MENU



Adjust tone menu



Major adjustment lattice point position



Adjustment procedure 1
(When a color differential meter is used)

1. First adjust the [MID-1] tone [G:].
2. Select adjustment point [No.2][G:].
   When the background is not [G] monochrome, press the [ENTER] key on the remote control to switch to solid [G] monochrome.
3. Measure the illumination at adjustment points No. 2, No.3, No.10 and No.11.
   The values should be:
   No.2 = Y2 [lx] No.10 = Y10 [lx]
   No.3 = Y3 [lx] No.11 = Y11 [lx]
4. No.2 and No.3 adjustment points have the average of Y2 and Y3.
   Y2 = (Y2 + Y3) / 2 ± 2 [%]
   Y3 = (Y2 + Y3) / 2 ± 2 [%]
5. No.10 and No.11 adjustment points have the average of Y10 and Y11.
   Y10 = (Y10 + Y11) / 2 ± 2 [%]
   Y11 = (Y10 + Y11) / 2 ± 2 [%]
6. Then adjust the [MID-1] tone [R] and [B].
   When the background is [G] monochrome, press the [ENTER] key on the remote control to switch to solid white.
7. Measure the color coordinates of adjustment point [No.1] and make a note of them.
   Assume that they are x = x1, y = y1.
   Note: When the CL-100 color and color difference meter is used, the [∆](delta) mode is convenient. When adjustment point [No.1] color coordinate has been selected, set the slide switch on the side to [∆](delta) while holding down the [F] button on the front panel. The measurement shown after this displays the deviation from measurement point 1.
8. Measure the color coordinates of measurement point [No.2] and adjust [No.2][R:] and [B:] so that the coordinates are as follows.
   x = x1 ± 0.005 , y = y1 ± 0.010
9. Similarly, measure adjustment points [No.3] to [No.17] and adjust their color coordinates starting in order from the small number points.
   This completes adjustments required for [MID-1].
   Note: Since excessive correction may lead to a correction data overview during internal calculations, use the following values for reference.
   [No.2] to [No.5] ± 40 or less
   [No.6] to [No.9] ± 50 or less
   [No.10] to [No.13] ± 70 or less
   [No.14] to [No.17] ± 120 or less
10. Then adjust the [MIN] tone [G] so that the adjustment values are two times as much as MID-1] tone [G] values.
    This completes [G] color adjustments.
11. Then adjust [MIN] tone [R] and [B].
    Select [No.2] [B:] and press the [ENTER] key on the Remote control transmitter to change to solid white.
12. Measure the color coordinates of adjustment point [No.1] and make a note of them.
    Assume that they are x = x1, y = y1.
13. Now measure the color coordinates of measurement point [No.2] and adjust [No.2][R:] and [B:] so that the coordinates are as follows.
    x = x1 ± 0.005 , y = y1 ± 0.010 (Target)
    x = x1 ± 0.020 , y = y1 ± 0.040
14. Similarly, measure adjustment points [No.3] to [No.17] and adjust their color coordinates starting in order from the small number points.
    This completes [MIN] tone adjustments.
15. Now make similar adjustments for [MID-2] tone. (Adjust [MID-2] tone [G] so that the adjustment data set half as many as [MID-1] tone [G].)
16. Now make similar adjustments for [MID-3], [MID-5], [MAX] tones. (It is not necessary to adjust the [G] data in these tones.)
17. After completing the step 16, set the value of the [MID-4] tone [R]: [No.2] to the mean of the values of the [R]: [No.2] in the [MID-3] and [MID-4] tones.
18. Set all the values for the [No.2] to [No.17] of the [MID-4] tone [R] and [B] in the same way as the step 17.
19. Finally, set the data of the [MID-6] tone [R] and [B] using the values of the [MID-5] and [MAX] tones in the same way as the [MID-4] tone [R] and [B] adjustments in the step 17 and 18.

Adjustment procedure 2
(visual inspection)

1. First adjust [MIN] tone [G:].
2. Select [No.2] [G:].
   If the background is [G] monochrome, press the [ENTER] key on the remote control to switch to solid white.
3. View measurement point [No.2] and [No.3]. Lower the [G] color intensity only of the color point whose [G] color is more intense than measurement point [No.1].
4. View measurement point [No.10] and [No.11]. Lower the [G] color intensity only of the color point whose [G] color is more intense than measurement point [No.1], and raise the intensity of the point whose color intensity is lower than measurement point [No.1].
5. Now adjust the [MIN] tone for colors [R] and [B].
6. View measurement points [No.2], [No.3], [No.10] and [No.11]. Adjust the [R] and [B] of each measurement point so that they have the same color as measurement point [No.1].

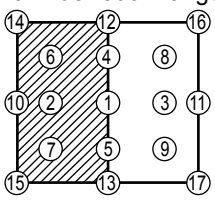
Adjustment technique:

First, adjust [B:] of the point whose color is to be adjusted so that it approximates that of [No.1]. If [R:] is low at this time, the image will have cyan cast, in which case [R:] is increased. On the other hand, if [R:] is excessive, the image will have a magenta cast, in which case [R:] is decreased.

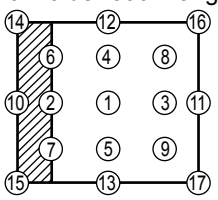
Overall, a cyan cast makes it easy to see color shading.

7. Next, view measurement points [No.4], [No.5], [No.12], [No.13] and make similar adjustments.
8. Then adjust measurement points [No.6], [No.7], [No.8], [No.9], [No.14], [No.15], [No.16] and [No.17]. This completes the [MIN] tone adjustments.
9. Make similar adjustments for other tones, except the [MID-4] and [MID-6] tones, as described in steps 1 to 8 above.

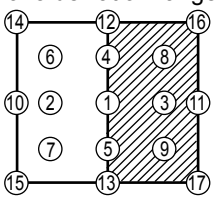
No. 2 deviation range



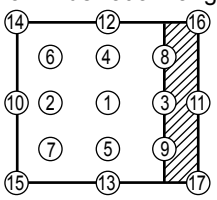
No. 10 deviation range



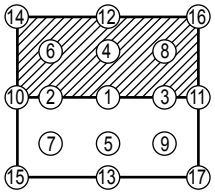
No. 3 deviation range



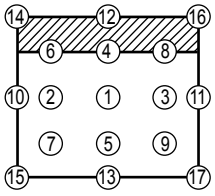
No. 11 deviation range



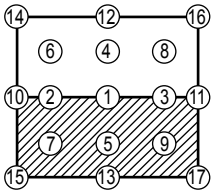
No. 4 deviation range



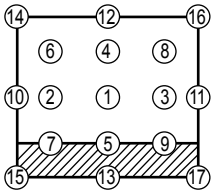
No. 12 deviation range



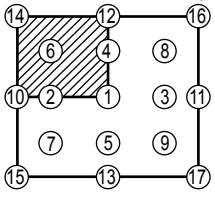
No. 5 deviation range



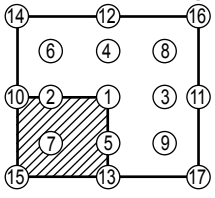
No. 13 deviation range



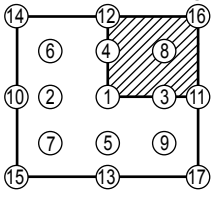
No. 6 deviation range



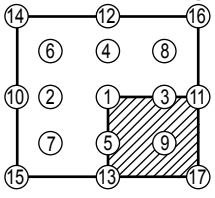
No. 7 deviation range



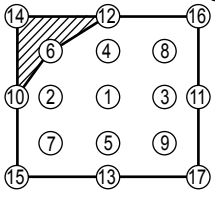
No. 8 deviation range



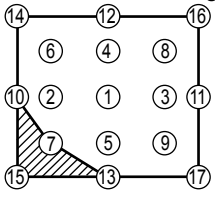
No. 9 deviation range



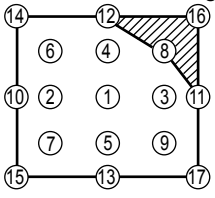
No. 14 deviation range



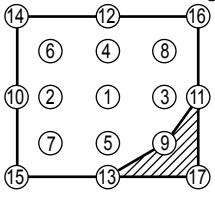
No. 15 deviation range



No. 16 deviation range

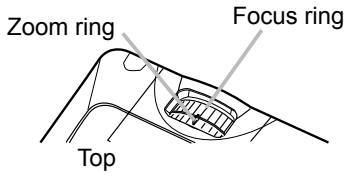


No. 17 deviation range



4-8 Adjusting the zoom and focus

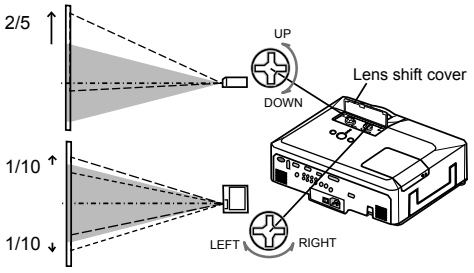
1. Use the zoom ring to adjust the screen size.
2. Use the focus ring to focus the picture.



4-9 Adjusting the lens shift

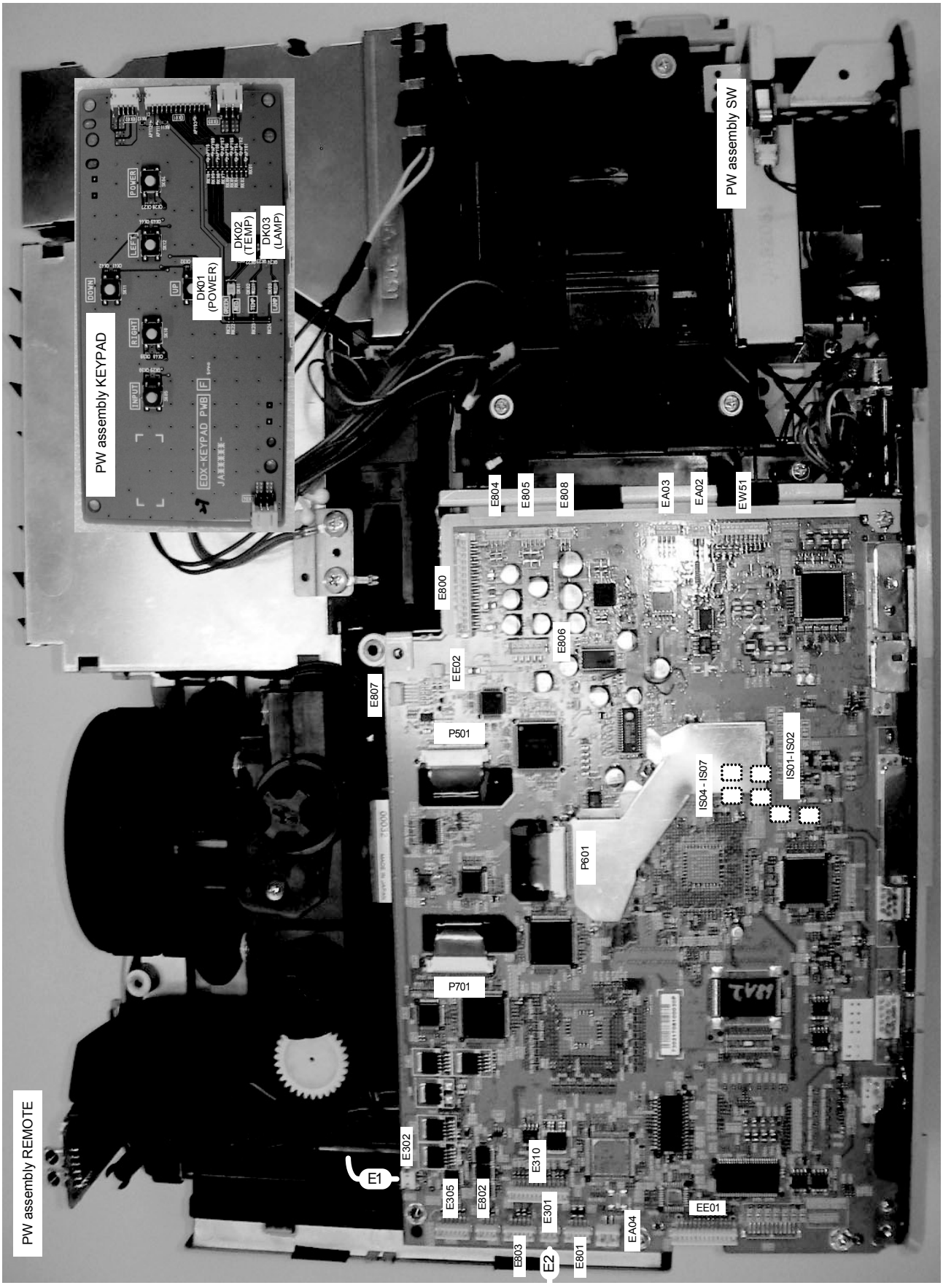
1. Use the vertical lens shift knob to shift the picture upward or downward.
2. Use the horizontal lens shift knob to shift the picture left or right.

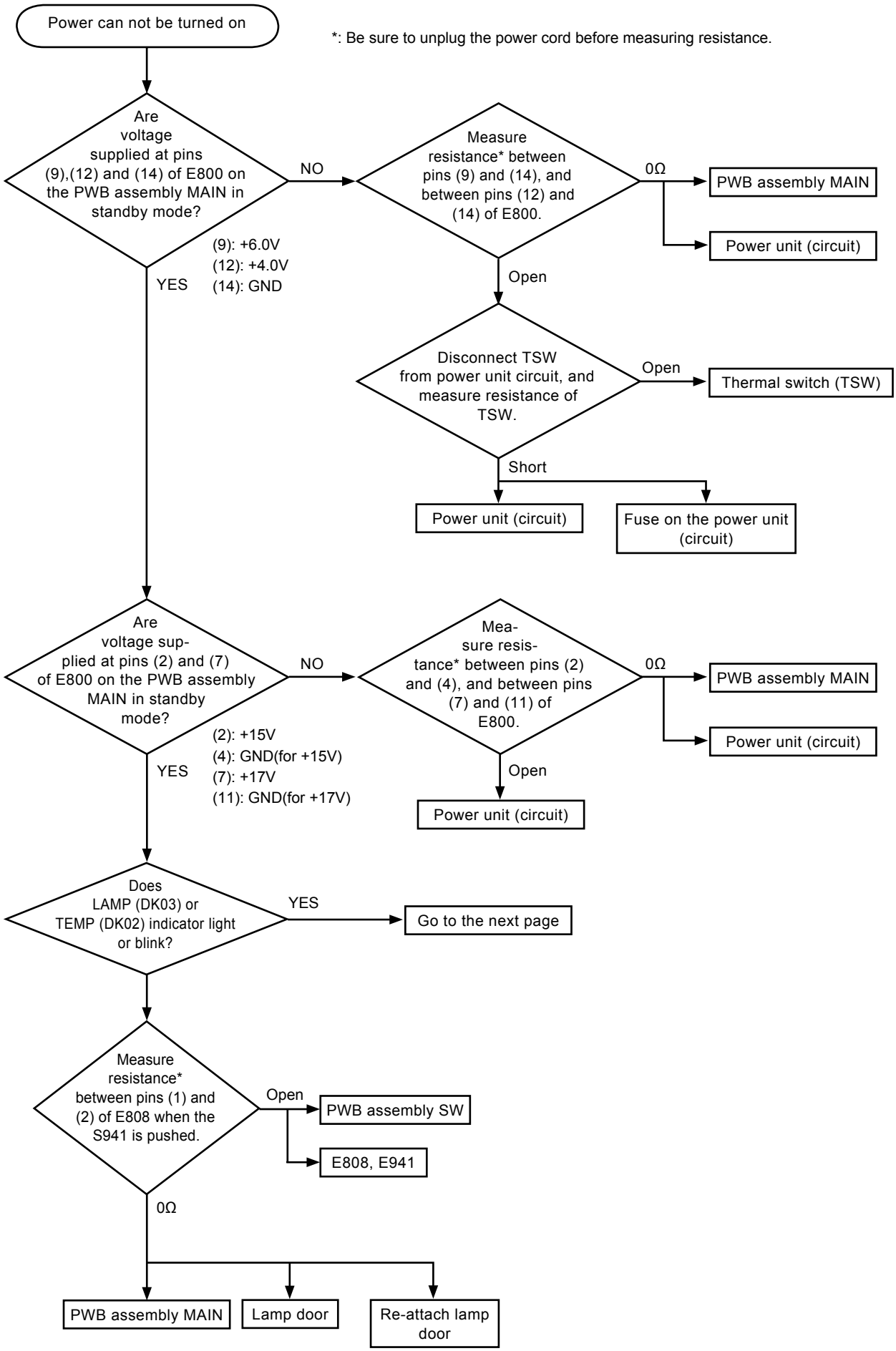
NOTE
When the vertical lens shift is adjusted, it is recommended to shift the picture upward for fine adjustment

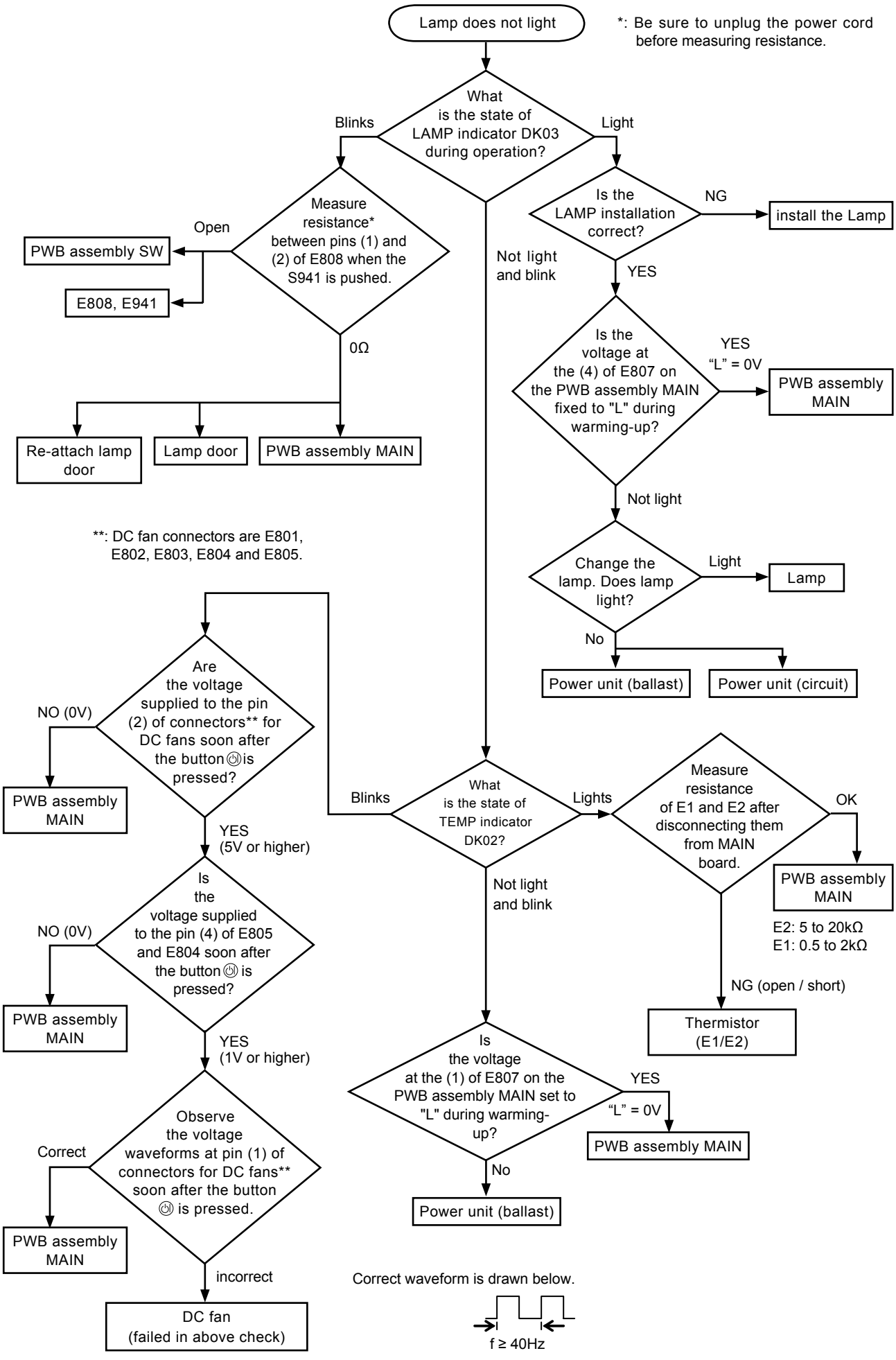


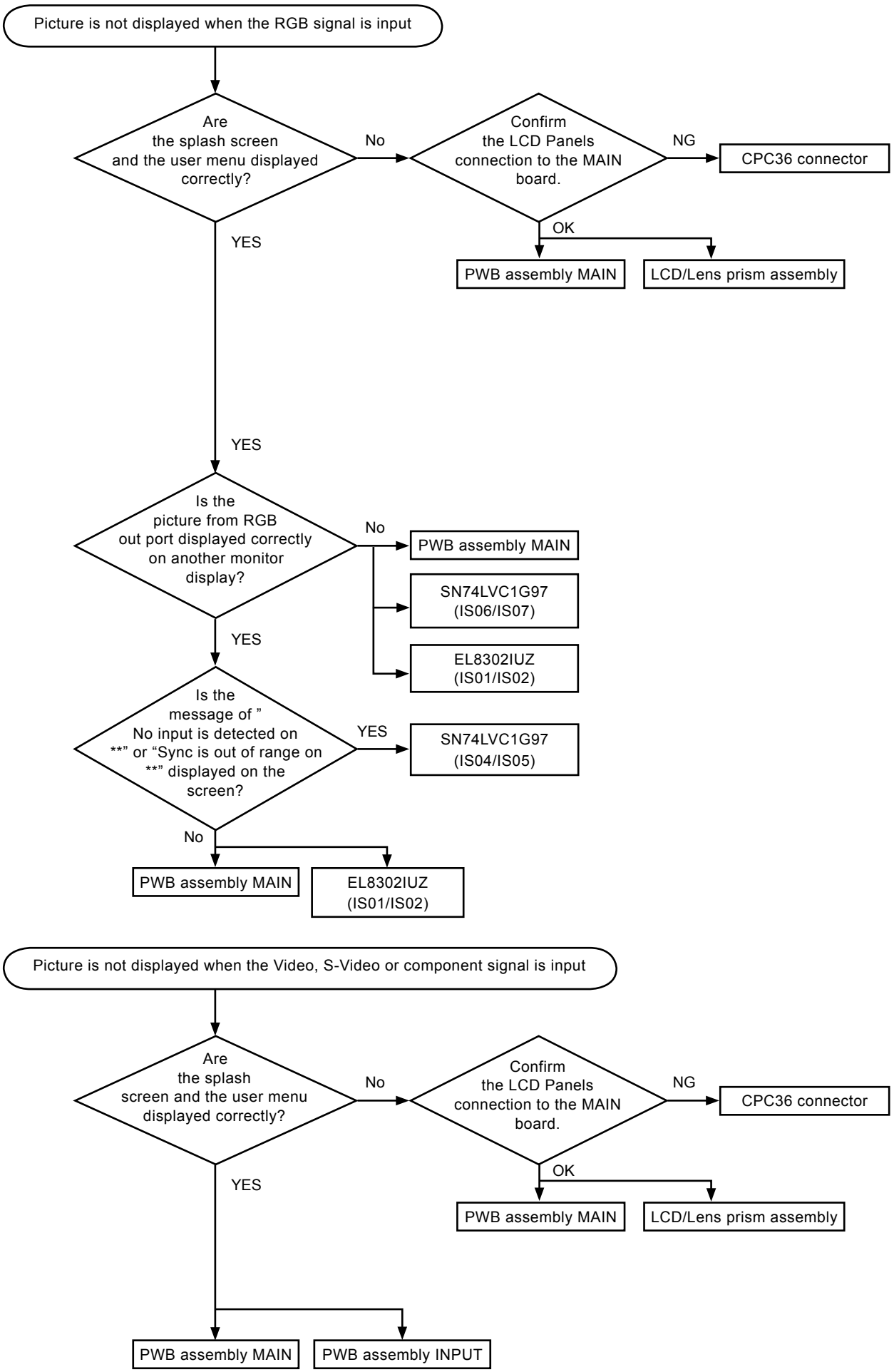
5. Troubleshooting

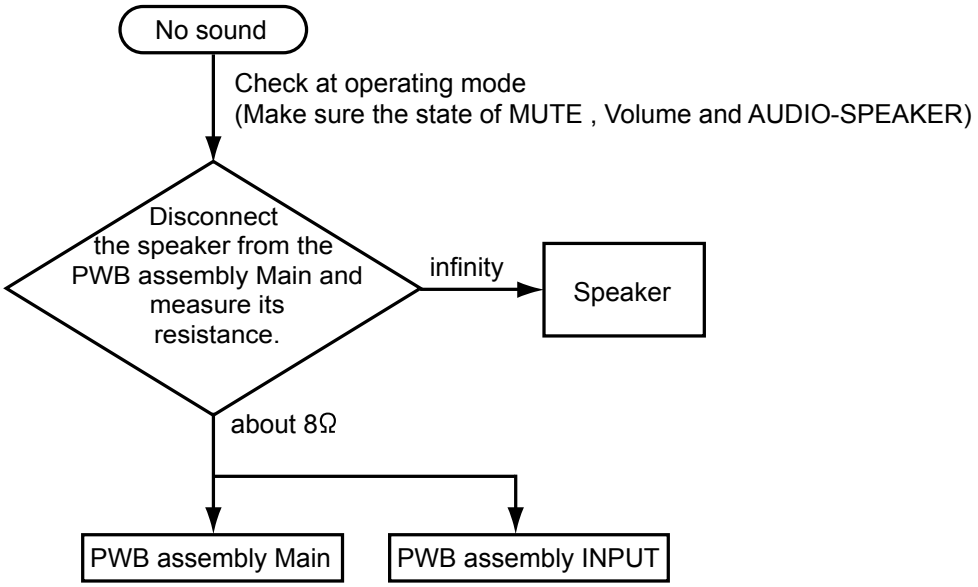
Check points

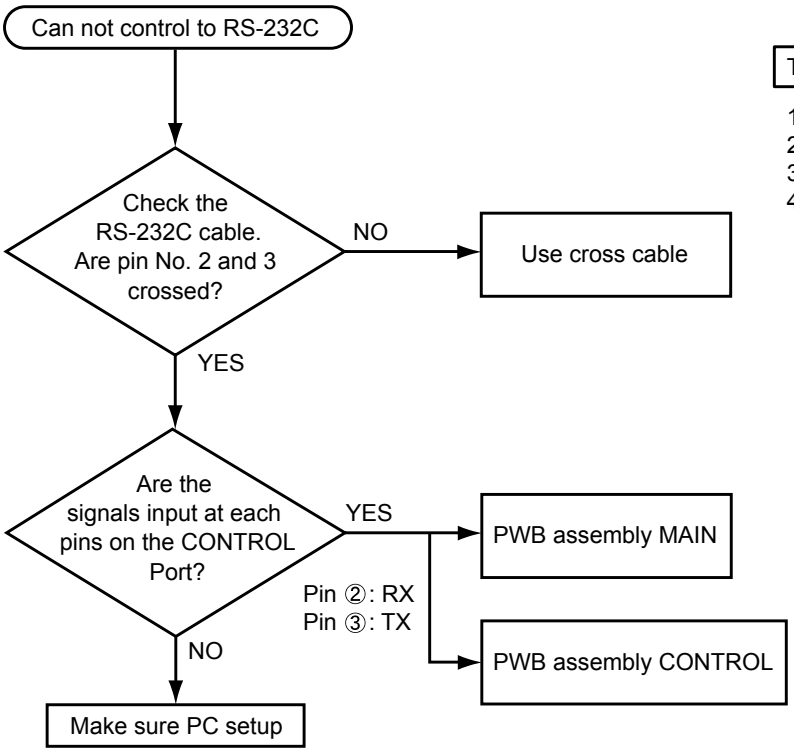



Power can not be turned on
*: Be sure to unplug the power cord before measuring resistance.
Are voltage supplied at pins (9),(12) and (14) of E800 on the PWB assembly MAIN in standby mode?
NO
Measure resistance* between pins (9) and (14), and between pins (12) and (14) of E800.
0Ω
PWB assembly MAIN
Power unit (circuit)
Open
(9): +6.0V
(12): +4.0V
(14): GND
YES
Disconnect TSW from power unit circuit, and measure resistance of TSW.
Open
Thermal switch (TSW)
Short
Power unit (circuit)
Fuse on the power unit (circuit)
Are voltage supplied at pins (2) and (7) of E800 on the PWB assembly MAIN in standby mode?
NO
Measure resistance* between pins (2) and (4), and between pins (7) and (11) of E800.
0Ω
PWB assembly MAIN
Power unit (circuit)
(2): +15V
(4): GND(for +15V)
(7): +17V
(11): GND(for +17V)
YES
Open
Power unit (circuit)
Does LAMP (DK03) or TEMP (DK02) indicator light or blink?
YES
Go to the next page
Measure resistance* between pins (1) and (2) of E808 when the S941 is pushed.
Open
PWB assembly SW
E808, E941
0Ω
PWB assembly MAIN
Lamp door
Re-attach lamp door


Lamp does not light
*: Be sure to unplug the power cord before measuring resistance.
What is the state of LAMP indicator DK03 during operation?
Blinks
Light
Measure resistance* between pins (1) and (2) of E808 when the S941 is pushed.
Open
PWB assembly SW
E808, E941
0Ω
Re-attach lamp door
Lamp door
PWB assembly MAIN
Is the LAMP installation correct?
NG
install the Lamp
YES
Not light and blink
Is the voltage at the (4) of E807 on the PWB assembly MAIN fixed to "L" during warming-up?
YES "L" = 0V
PWB assembly MAIN
Not light
Change the lamp. Does lamp light?
Light
Lamp
No
Power unit (ballast)
Power unit (circuit)
**: DC fan connectors are E801, E802, E803, E804 and E805.
Are the voltage supplied to the pin (2) of connectors** for DC fans soon after the button ⏻ is pressed?
NO (0V)
PWB assembly MAIN
YES (5V or higher)
Is the voltage supplied to the pin (4) of E805 and E804 soon after the button ⏻ is pressed?
NO (0V)
PWB assembly MAIN
YES (1V or higher)
Observe the voltage waveforms at pin (1) of connectors for DC fans** soon after the button ⏻ is pressed.
Correct
PWB assembly MAIN
incorrect
DC fan (failed in above check)
What is the state of TEMP indicator DK02?
Blinks
Lights
Not light and blink
Measure resistance of E1 and E2 after disconnecting them from MAIN board.
OK
PWB assembly MAIN
E2: 5 to 20kΩ
E1: 0.5 to 2kΩ
NG (open / short)
Thermistor (E1/E2)
Is the voltage at the (1) of E807 on the PWB assembly MAIN set to "L" during warming-up?
YES
"L" = 0V
PWB assembly MAIN
No
Power unit (ballast)
Correct waveform is drawn below.
f ≥ 40Hz

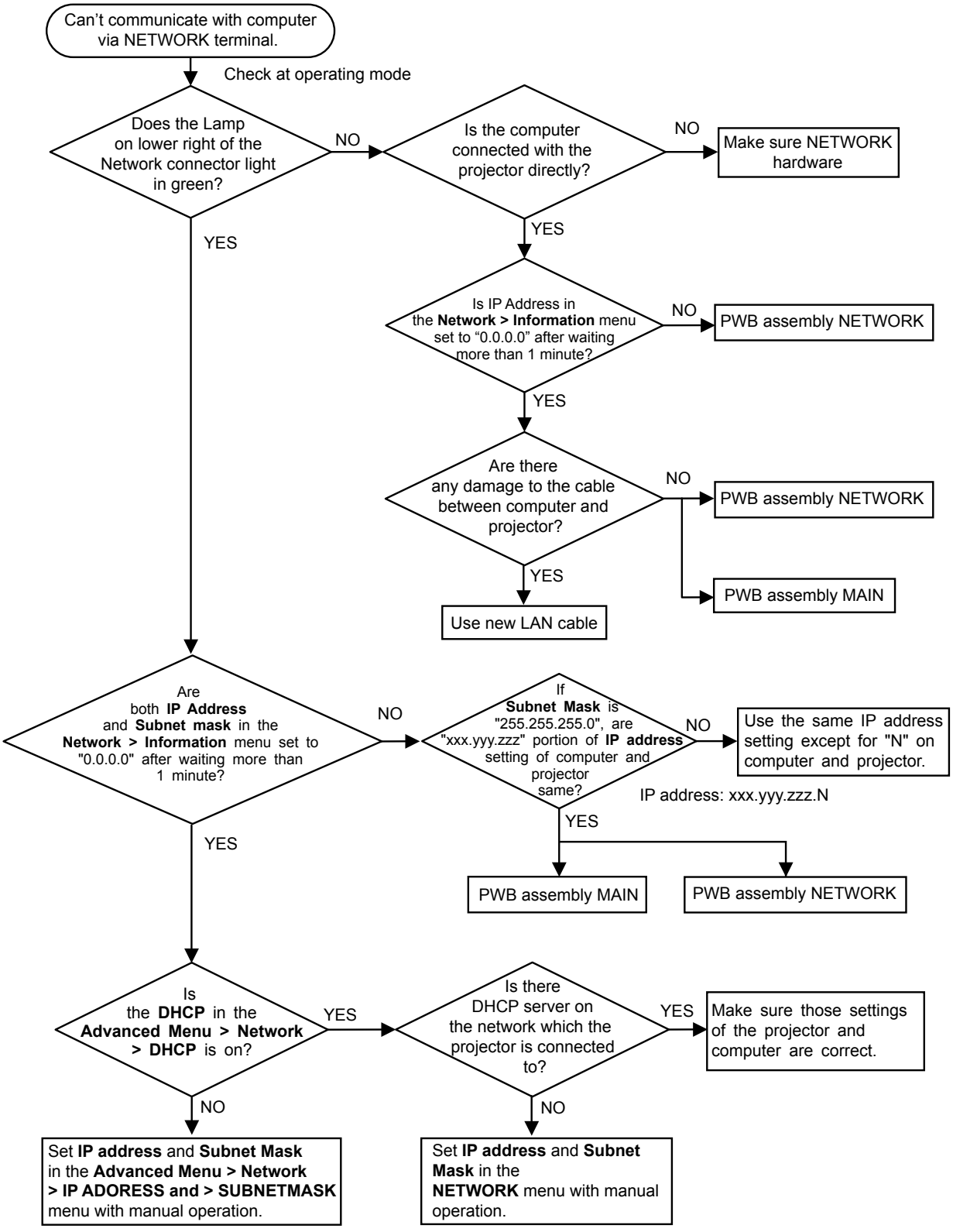

Picture is not displayed when the RGB signal is input
Are the splash screen and the user menu displayed correctly?
No
Confirm the LCD Panels connection to the MAIN board.
NG
CPC36 connector
OK
PWB assembly MAIN
LCD/Lens prism assembly
YES
YES
Is the picture from RGB out port displayed correctly on another monitor display?
No
PWB assembly MAIN
SN74LVC1G97 (IS06/IS07)
EL8302IUZ (IS01/IS02)
YES
Is the message of " No input is detected on **" or "Sync is out of range on **" displayed on the screen?
YES
SN74LVC1G97 (IS04/IS05)
No
PWB assembly MAIN
EL8302IUZ (IS01/IS02)
Picture is not displayed when the Video, S-Video or component signal is input
Are the splash screen and the user menu displayed correctly?
No
Confirm the LCD Panels connection to the MAIN board.
NG
CPC36 connector
OK
PWB assembly MAIN
LCD/Lens prism assembly
YES
PWB assembly MAIN
PWB assembly INPUT

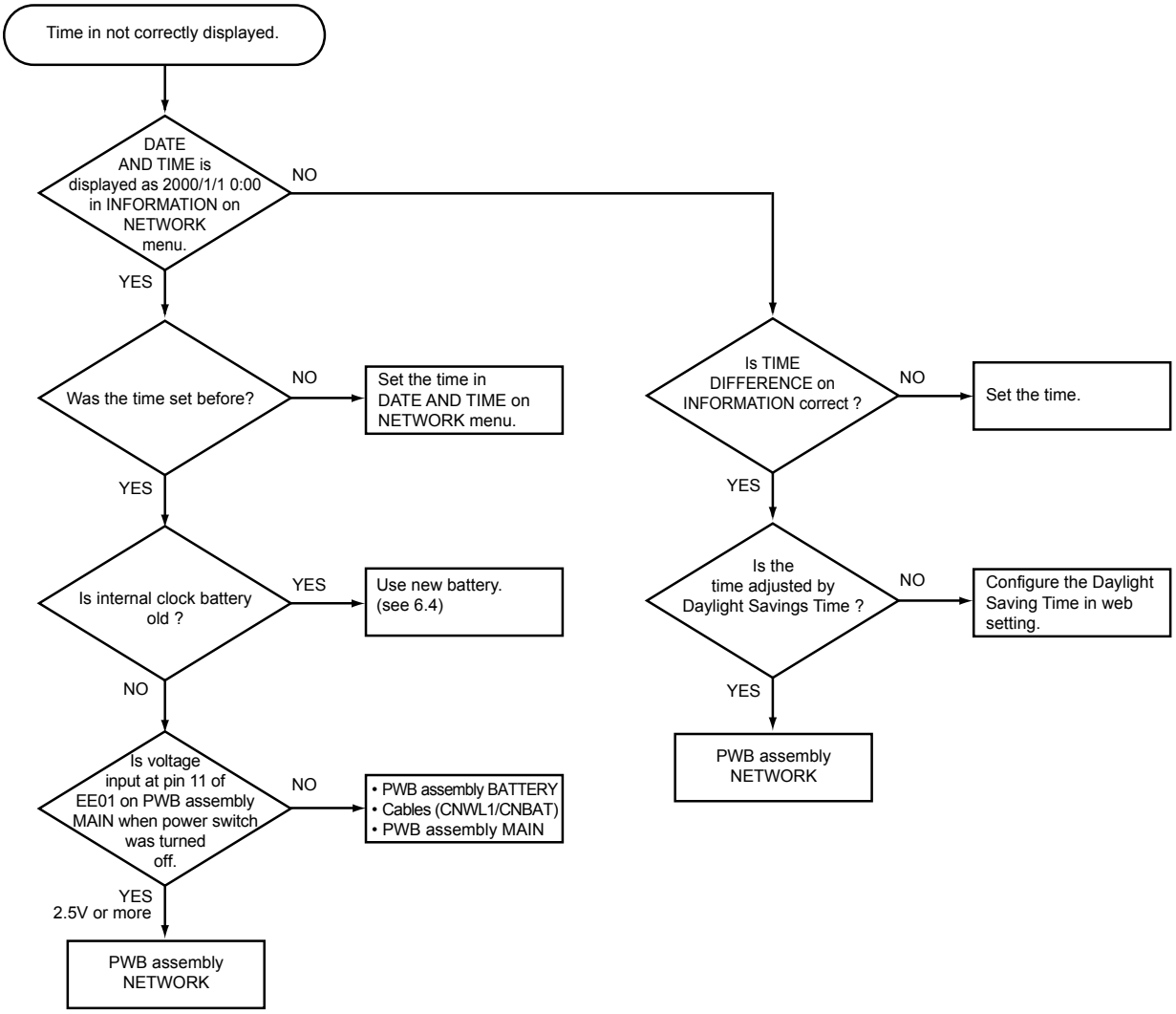

No sound
Check at operating mode
(Make sure the state of MUTE , Volume and AUDIO-SPEAKER)
Disconnect the speaker from the PWB assembly Main and measure its resistance.
infinity
Speaker
about 8Ω
PWB assembly Main
PWB assembly INPUT



The check after parts change

1. PC power supply OFF
2. Connection of cable
3. Projector starting
4. PC starting
   *When not operating :
   PC set up change of cable.


Can't communicate with computer via NETWORK terminal.
Check at operating mode
Does the Lamp on lower right of the Network connector light in green?
NO
Is the computer connected with the projector directly?
NO
Make sure NETWORK hardware
YES
YES
Is IP Address in the **Network > Information** menu set to "0.0.0.0" after waiting more than 1 minute?
NO
PWB assembly NETWORK
YES
Are there any damage to the cable between computer and projector?
NO
PWB assembly NETWORK
PWB assembly MAIN
YES
Use new LAN cable
Are both **IP Address** and **Subnet mask** in the **Network > Information** menu set to "0.0.0.0" after waiting more than 1 minute?
NO
If **Subnet Mask** is "255.255.255.0", are "xxx.yyy.zzz" portion of **IP address** setting of computer and projector same?
NO
Use the same IP address setting except for "N" on computer and projector.
IP address: xxx.yyy.zzz.N
YES
YES
PWB assembly MAIN
PWB assembly NETWORK
Is the **DHCP** in the **Advanced Menu > Network > DHCP** is on?
YES
Is there DHCP server on the network which the projector is connected to?
YES
Make sure those settings of the projector and computer are correct.
NO
NO
Set **IP address** and **Subnet Mask** in the **Advanced Menu > Network > IP ADORESS and > SUBNETMASK** menu with manual operation.
Set **IP address** and **Subnet Mask** in the **NETWORK** menu with manual operation.


Time in not correctly displayed.
DATE AND TIME is displayed as 2000/1/1 0:00 in INFORMATION on NETWORK menu.
NO
YES
Was the time set before?
NO
Set the time in DATE AND TIME on NETWORK menu.
YES
Is internal clock battery old ?
YES
Use new battery. (see 6.4)
NO
Is voltage input at pin 11 of EE01 on PWB assembly MAIN when power switch was turned off.
NO
• PWB assembly BATTERY
• Cables (CNWL1/CNBAT)
• PWB assembly MAIN
YES 2.5V or more
PWB assembly NETWORK
Is TIME DIFFERENCE on INFORMATION correct ?
NO
Set the time.
YES
Is the time adjusted by Daylight Savings Time ?
NO
Configure the Daylight Saving Time in web setting.
YES
PWB assembly NETWORK

6. Service points

6-1 Lead free solder [CAUTION]

This product uses lead free solder (unleaded) to help preserve the environment. Please read these instructions before attempting any soldering work.

⚠ CAUTION
Always wear safety glasses to prevent fumes or molten solder from getting into the eyes. Lead free solder can splatter at high temperatures (600˚C).

■ Lead free solder indicator

Printed circuit boards using lead free solder are engraved with an "F" or "LF".

■ Properties of lead free solder

The melting point of lead free solder is 40-50˚C higher than leaded solder.

■ Servicing solder

Solder with an alloy composition of Sn-3.0Ag-0.5Cu or Sn-0.7Cu is recommended.

Although servicing with leaded solder is possible, there are a few precautions that have to be taken. (Not taking these precautions may cause the solder to not harden properly, and lead to consequent malfunctions.)

Precautions when using leaded solder

- Remove all lead free solder from soldered joints when replacing components.
- If leaded solder should be added to existing lead free joints, mix in the leaded solder thoroughly after the lead free solder has been completely melted (do not apply the soldering iron without solder).

■ Servicing soldering iron

A soldering iron with a temperature setting capability (temperature control function) is recommended.

The melting point of lead free solder is higher than leaded solder. Use a soldering iron that maintains a high stable temperature (large heat capacity), and that allows temperature adjustment according to the part being serviced, to avoid poor servicing performance.

Recommended soldering iron:

- Soldering iron with temperature control function (temperature range: 320-450˚C)

Recommended temperature range per part:

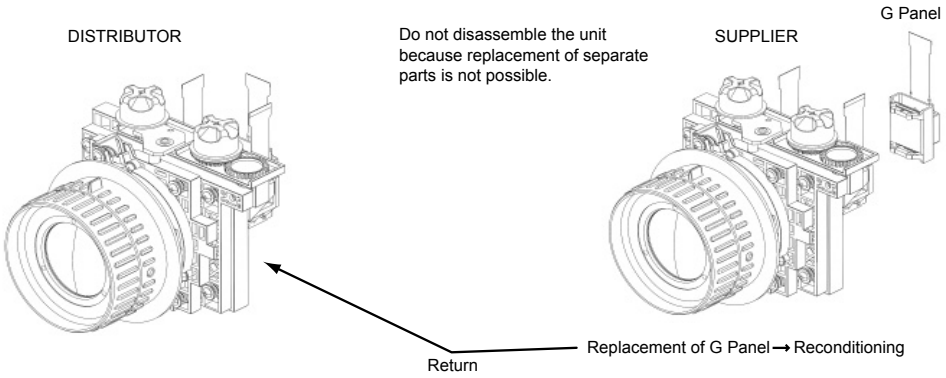
Part	Soldering iron temperature
Mounting (chips) on mounted PCB	320˚C±30˚C
Mounting (chips) on empty PCB	380˚C±30˚C
Chassis, metallic shield, etc.	420˚C±30˚C

The PWB assembly which has used lead free solder

PWB assembly MAIN	PWB assembly INPUT
PWB assembly REMOTE	PWB assembly SW
PWB assembly CONTROL	PWB NETWORK
PWB assembly KEYPAD	POWER UNIT (BALLAST)
PWB assembly BATTERY	POWER UNIT (CIRCUIT)

6-2 Before Replacing The LCD/Lens Prism

You should not replace separately the parts of the liquid crystal LCD/Lens prism because it works properly only when used together. Therefore, regarding these parts, you can either replace part, LCD/Lens prism assembly, or send the whole unit LCD/Lens prism assembly back to HITACHI, where we will replace the malfunctioning part, recondition the device and send it back to you.


DISTRIBUTOR
Do not disassemble the unit because replacement of separate parts is not possible.
SUPPLIER
G Panel
Return
Replacement of G Panel → Reconditioning

6-3 Cleaning up dust from panels and optical filters

⚠ WARNING

Wear sunglasses to protect your eyes when you maintain the projector with its lamp on.

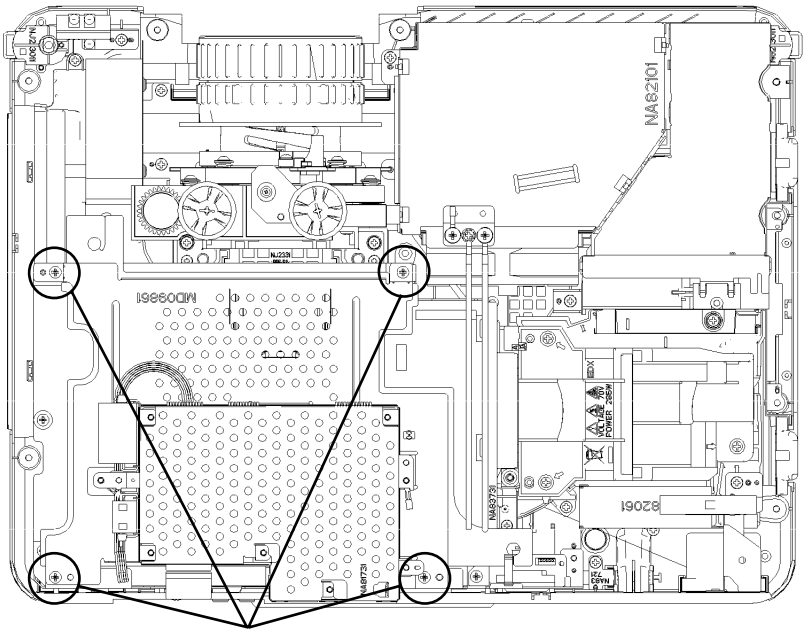
1. Preparation

Please prepare cleaning tools and materials as follows. And prepare relatively clean room not to work in additional dust, while removing operation.

(1) Swab for cleaning : P#: NX05742, "Cotton stick L70"
(2) Air duster (Dust blower, spray can)
(3) Vacuum cleaner

2. Disassemble and setting up.

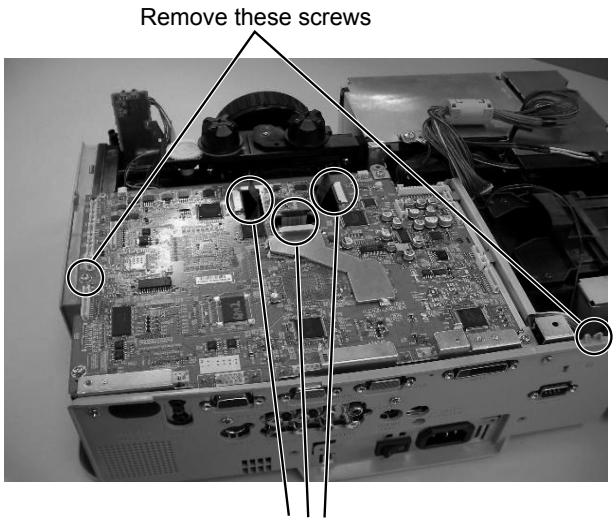
(1) Turn off the projector, and unplug the power cord.
(2) Remove the lamp cover and upper case, according to the disassembling diagram of chapter 8.
(3) Unscrew the shield bracket of PWB assembly MAIN to make it free.

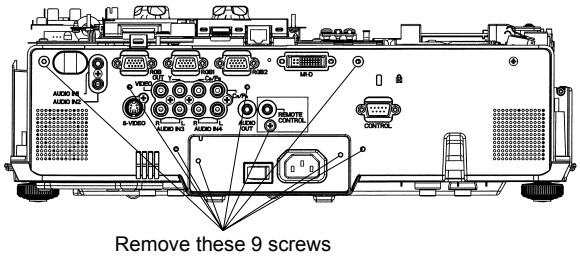


⚠CAUTION

Make sure to remove the shield bracket before removing the PWB assembly MAIN.
Otherwise, flexible cables will be damaged.

(4) Unscrew PWB assembly MAIN to make it free and disconnect the LCD panel flexible cables.

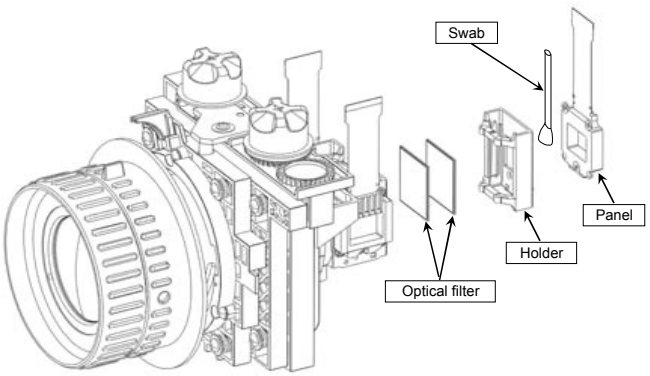




(5) Press and hold the switch S941 using an insulator during maintenance.

(6) Keep the unscrewed wires away from all of electric parts.

3. Maintenance point

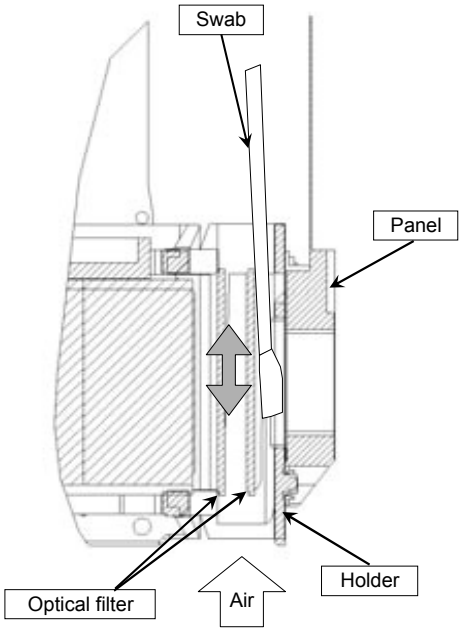


Each color part has same construction. By using swab and air duster, you can easily remove dust from panel and optical filter.

4. Cleaning the panels and optical filters

(1) Turn on the set and lit on the lamp.

(2) By using swab and air duster, remove the dust. Focusing dust makes you check the dust on screen.



- While removing the dust, separated dust will be blown off by air cooling system.
- Please pay attention not to damage panels and optical filters.

5. Re-assembly

(1) Turn off the set and unplug the power cord.

(2) Remove an insulator from S941.

(3) Screw down the PWB assembly MAIN and connect the LCD panel flexible cables to the PWB assembly MAIN.

(4) Re-assemble the set.

(5) While re-assembling, please clean the intake filter by using a vacuum cleaner.

6-4 Battery

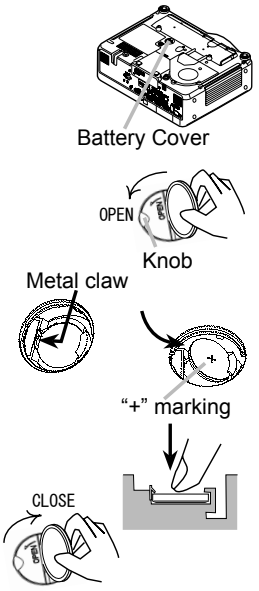
6-4-1 Replacing Internal Clock Battery

Consumption of the battery makes the clock not to work correctly. When the clock is wrong or it has stopped, please replace the battery according to the following procedures.

⚠ WARNING

Always handle the batteries with care and use them only as directed. Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.
And also improper use may result in cracking or leakage, which could result in fire, injury and/or pollution of the surrounding environment.
• Be sure to use only the batteries specified. Do not use batteries of different types at the same time. Do not mix a new battery with used one.
• Make sure the plus and minus terminals are correctly aligned when loading a battery.
If the battery is placed in the battery holder upside-down, it may be hard to remove.
• Keep a battery away from children and pets. If swallowed consult a physician immediately for emergency treatment.
• Do not short circuit or solder a battery.
• Do not allow a battery in a fire or water. Keep batteries in a dark, cool and dry place.
• If you observe a leakage of a battery, wipe out the flower and then replace a battery. If the liquid adheres to your body or clothes, rinse well with water immediately.
• Obey the local laws on disposing the battery.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector has cooled adequately, slowly turn over the projector, so that the bottom is facing.
3. Remove the battery cover.
   Turn the battery cover in the direction indicated “OPEN” using such as coins. Then the battery cover will come up. While removing the battery cover, pick its knob.
4. Take the old battery out.
   Press the metal claw of the battery holder. Then the battery will come up. Remove the battery.
5. Put a new battery in.
   Replace battery with HITACHI MAXELL, Part No.CR2032 only. Use of another battery may present a risk of fire or explosion.
   Insert a new battery in the battery holder according to its minus terminal ⊖ as indicated in the battery holder, so that the side marked by + is facing. And push the battery into the battery holder fully to fix.
6. Close the battery cover. Replace the battery cover in place, then turn it in the direction indicated “CLOSE” using such as coins, to fix.

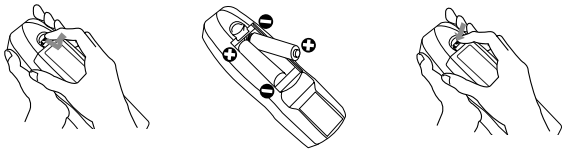


If the battery is placed in the battery holder upside-down, follow the procedure below to remove and reload it properly.
1. Remove the battery cover as described in steps 1 through 3 above.
2. Turn the projector over again, so that the top of the projector is facing up.
3. While lifting the side of the projector closest to the lens, press the metal claw of the battery holder. The battery will fall out of the holder, so be careful not to lose it.
4. Turn the projector over once more, so that the bottom faces up, and reload the battery correctly.

NOTE

• The internal clock’s time will be reset when the battery is removed. Please reconfigure the time via the menu or a web browser after replacing the battery.

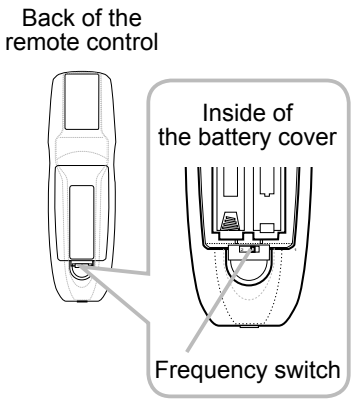
6-4-2 Potting batteries into the remote control



1. Remove the battery cover.
   Slide back and remove the battery cover in the direction of the arrow.
2. Insert the batteries.
   Align and insert the two AA batteries according to their plus and minus terminals as indicated in the remote control.
3. Close the battery cover.
   Replace the battery cover in the direction of the arrow and snap it back into place.

Changing the frequency of remote control signal

The accessory remote control has the choice of the mode 1 or the mode 2, in the frequency of its signal.
If the remote control does not function properly, attempt to change the signal frequency. Please remember that the “REMOTE FREQ.” in SERVICE item of OPTION menu of the projector to be controlled should be set to the same mode as the remote control.
To set the mode of the remote control, slide the knob of the frequency switch inside the battery cover into the position indicated by the mode number to choose.



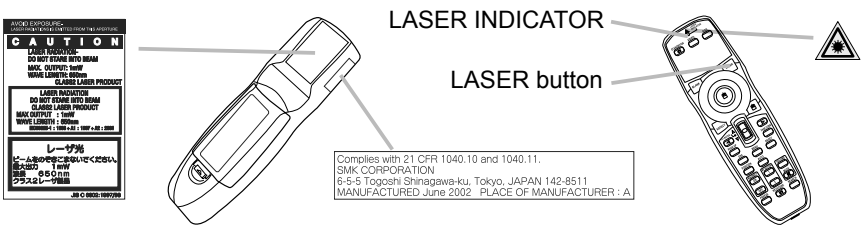
● About the Laser pointer

⚠ WARNING

• The laser pointer of the remote control is used in place of a finger or rod. Never look directly into the laser beam outlet or point the laser beam at other people. The laser beam can cause vision problems.

⚠ CAUTION

• Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.


C A U T I O N
LASER INDICATOR
LASER button
Complies with 21 CFR 1040.10 and 1040.11.
SMK CORPORATION
6-5-5 Togoshi Shinagawa-ku, Tokyo, JAPAN 142-8511
MANUFACTURED June 2002 PLACE OF MANUFACTURER : A

This remote control has a laser pointer in place of a finger or rod. The laser beam works and the LASER INDICATOR lights while the LASER button is pressed.

6-5 Air filter

⚠ WARNING

• Before caring, make sure the power switch is off and the power cable is not plugged in, then allow the projector to cool sufficiently. The care in a high temperature state of the projector could cause an electric shock, a burn and/or malfunction to the projector.
• Use only the air filter of the specified type. Do not use the projector with the air filter and the filter cover removed. It could result in a fire and/or malfunction to the projector.
• The air filter should be cleaned periodically. If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn and/or malfunction to the projector.

NOTE

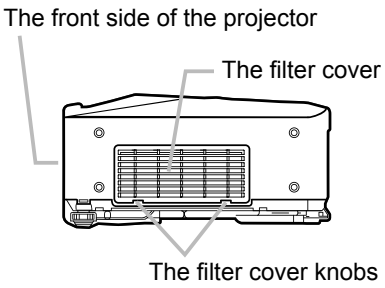
• Please replace the air filter when it is damaged or too soiled, and also when you replace the lamp.
• Please reset the filter time only when you have cleaned or replaced the air filter, for a suitable indication about the air filter.
• The projector may display the message such as “CHECK THE AIR FLOW” or turn itself off, to prevent the internal heat level rising.

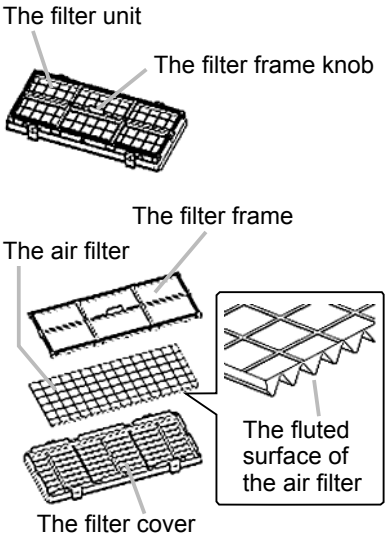
If the air filter becomes clogged by dust or the like, internal temperatures rise and could cause a fire, a burn and/or malfunction to the projector. When the indicators or a message prompts to clean the air filter, clean the air filter as soon as possible.
Please check and clean the air filter periodically, even if there is no message.Please replace the air filter when it is damaged or too soiled.

And also when you replace the lamp, please replace the air filter. An air filter of specified type will come together with a replacement lamp for this projector.

1. Turn the projector off, and unplug the power cord. Allow the lamp to cool for at least 45 minutes.
2. When the projector is suspended from the ceiling, apply the vacuum cleaner to and around the filter cover first, to prevent penetration of dust or the like.
3. Hold the filter cover knobs while lifting it.The filter unit made up the filter cover and others will come off.
4. Use a vacuum cleaner for the filter vent of the projector and the filter frame side of the filter unit.
   If the air filter is damaged or too soiled, replace it according to the following procedure number 5 to 7. Otherwise, please jump to the procedure number 8.
5. To remove the filter frame, hold the filter cover while holding and pulling the filter frame’s knob by another hand.
6. Replace the air filter with new one. It is recommended that the fluted surface of the air filter faces the filter cover.
7. Put the filter frame back.
8. Put the filter unit back into the projector.
9. Turn the projector on and reset the filter time using the FILTER TIME function.

(1) Press the MENU button to display a menu. When the EASY MENU has appeared, please skip the next step (2).
(2) Point at the “OPTION” in the left column of the menu using ▼/▲ button, then press the ► button.
(3) Point at the “FILTER TIME” using ▼/▲ button, then press the ► button. A dialog will appear.
(4) Press the ▲ button to select “RESET” on the dialog. It performs resetting the filter time.





6-6 Lamp

⚠ WARNING

- The projector uses a high-pressure mercury glass lamp. The lamp can **break with a loud bang, or burn out,** if jolted or scratched, handled while hot, or worn over time. Note that each lamp has a different lifetime, and some may burst or burn out soon after you start using them. In addition, when the bulb bursts, it is possible for **shards of glass** to fly into the lamp housing, and for **gas containing mercury** to escape from the projector's vent holes.

- **About disposal of a lamp** • This product contains a mercury lamp; do not put it in the trash. Dispose of in accord with environmental laws.
For lamp recycling, go to www.lamprecycle.org. (in the US) For product disposal, contact your local government agency or www.eiae.org (in the US) or www.epsc.ca (in Canada).

Disconnect the plug from the power outlet

- If the lamp should break (it will make a loud bang when it does), unplug the power cord from the outlet. Note that shards of glass could damage the projector's internals, or cause injury during handling.
- If the lamp should break (it will make a loud bang when it does), ventilate the room well, and make sure not to breathe the gas that comes out of the projector vents, or get it in your eyes or mouth.
- Before replacing the lamp, turn the projector off and unplug the power cord, then wait at least 45 minutes for the lamp to cool sufficiently. Handling the lamp while hot can cause burns, as well as damaging the lamp.

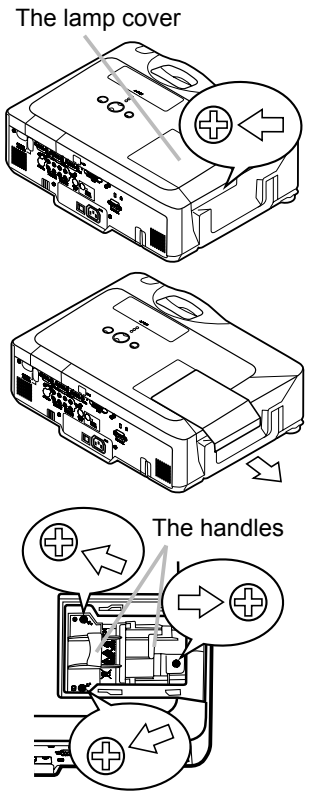
- Never unscrew except the appointed (marked by an arrow) screws.
- Do not open the lamp cover while the projector is suspended from above. This is dangerous, since if the lamp's bulb has broken, the shards will fall out when the cover is opened.
- Do not use the projector with the lamp cover removed. At the lamp replacing, make sure that the screws are screwed in firmly. Loose screws could result in damage or injury.

- Use only the lamp of the specified type.
- If the lamp breaks soon after the first time it is used, it is possible that there are electrical problems elsewhere besides the lamp. If this happens, contact your local dealer or a service representative.
- Handle with care: jolting or scratching could cause the lamp bulb to burst during use.
- Using the lamp for long periods of time could cause it dark, not to light up or to burst. When the pictures appear dark, or when the color tone is poor, please replace the lamp as soon as possible. Do not use old (used) lamps; this is a cause of breakage.

● Replacing the Lamp

A lamp has a finite product life. Using the lamp for long periods of time could cause the pictures darker or the color tone poor. Note that each lamp has a different lifetime, and some may burst or burn out soon after being started using.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool for at least 45 minutes.
2. Prepare a new lamp.
3. Loosen the screw (marked by arrow) of the lamp cover and then slide the lamp cover to the side to remove it.
4. Loosen the 3 screws (marked by arrow) of the lamp, and slowly pick up the lamp by the handles.
5. Insert the new lamp, and retighten firmly the 3 screws of the lamp that are loosened in the previous process to lock it in place.
6. Slide the lamp cover back in place and firmly fasten the screw of the lamp cover.
7. Turn the projector on and reset the lamp time using the LAMP TIME function in the OPTION menu.
(1) Press the MENU button to display a menu. Only when the EASY MENU has appeared, please perform the next step (2).
(2) Point at the “Go to Advanced Menu …” in the menu using ▼/▲ button, then press the ► button.
(3) Point at the “OPTION” in the left column of the menu using ▼/▲ button, then press the ► button.
(4) Point at the ”LAMP TIME” using ▼/▲ button, then press the ► button. A dialog will appear.
(5) Press the ▲ button to select “RESET” on the dialog. It performs resetting the lamp time.



NOTE
• Please reset the lamp time only when you have replaced the lamp, for a suitable indication about the lamp.

6-7 Lens

⚠ WARNING

- Before replacing the projector lens, be sure to read this manual, the “User's Manual-Safety Guide” and the “Optional Lens User's Manual” of the LCD projector for use with this lens.
- Do not place the lens in a location subject to direct sunlight or other strong lighting or near heat-radiating equipment.
- Do not subject the lens to shocks.
- Be sure to unplug the LCD projector before replacing the lens.
- Do not touch the fan of the LCD projector during operation.
- Before replacing the lens, be sure to turn off and unplug the LCD projector, and allow at least 45 minutes for the projector to fully cool.
- When attaching, take care so that dust not enter inside.

⚠ CAUTION

- When replacing the lens, do not touch the LCD panels or polarizing plates of the LCD projector or subject them to shocks.
- When replacing the lens, be careful not to damage the connectors or wires inside the LCD projector.
- After replacing the lens, part of the lens may stick out from the LCD projector.

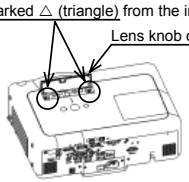
⚠ ATTENTION

- Do not touch the lens directly with your hands or fingers.
  This can dirty the lens and cause deterioration in image quality.
- The lens is a precision optical device. Carefully handle the lens without subjecting it to shocks or vibrations.
- When resting the lens on a surface, place the lens face down on a soft cloth.
- Select Lens type in OPTION-SERVICE-LENS TYPE Menu after changing the Lens.

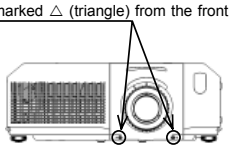
Replacing the Lens

1.Remove the front cover.

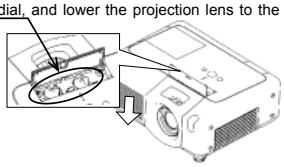
(1) Remove the 2 screws marked △ (triangle) from the inside of the lens knob cover.



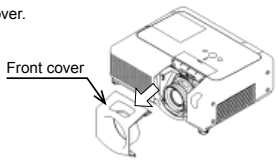
(2) Remove the 2 screws marked △ (triangle) from the front of the projector.



(3)Turn the lens shift dial, and lower the projection lens to the lowest position.

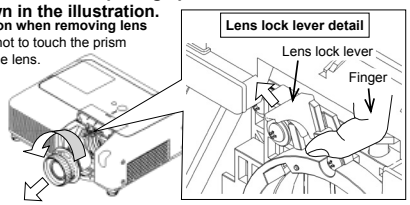


(4) Remove the front cover.



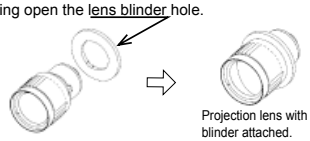
2.Insert your finger from the side, turn the lens to the left and remove while pulling up on the lens lock lever, as shown in the illustration.

※ **Caution when removing lens**
Be sure not to touch the prism behind the lens.

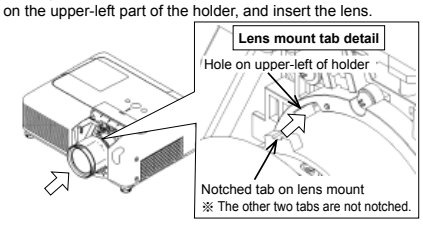


3.Attach the replacement projection lens.

(1) Attach the lens blinder to the rear of the projection lens while holding open the lens blinder hole.



(2) Line up the notched tab on the lens mount with the hole on the upper-left part of the holder, and insert the lens.



(3) Turn the lens to the right until it "clicks" into place to ensure that the lens is locked in place.

4.Reattach the front cover to complete lens replacement.

(1) Reattach the included front cover.
(2) Re-fasten the 2 screws marked △(triangle) that were removed in step 1.(2).
(3) Re-fasten the 2 screws marked △(triangle) that were removed in step 1.(1).

6-8 Other care

⚠ WARNING

Before caring, make sure the power switch is off and the power cable is not plugged in, and then allow the projector to cool sufficiently. The care in a high temperature state of the projector could cause a burn and/ or malfunction to the projector.
Avoid wetting the projector or inserting liquids in the projector. It could result in a fire, an electric shock, and and/or malfunction to the projector.
• Don't put a container containing water , cleaner or chemicals near the projector.
• Don't use aerosols or sprays.

⚠ CAUTION

Please take right care of the projector according to the following. Incorrect care could cause not only an injury but adverse influence such as discoloration, peeling paint, etc.
• Do not use cleaner or chemicals other than those listed below.
• Do not polish or wipe with hard objects.

● **Inside of the projector**

In order to ensure the safe use of the projector, it needs to clean and inspect the projector about once a year.

● **Caring for the lens**

If the lens is flawed, soiled or fogged, it could cause deterioration of display quality. Please take care of the lens, being cautions of the handling.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe the lens with a commercially available lens-cleaning wipe. Do not touch the lens directly with your hand.

● **Caring for the cabinet and remote control**

Incorrect care could have adverse influence such as discoloration, peeling paint, etc.

1. Turn the projector off, and unplug the power cord. Allow the projector to cool sufficiently.
2. After making sure that the projector is cool adequately, lightly wipe with gauze or a soft cloth.
   If soiling is severe, dip soft cloth in water or a neutral cleaner dilute in water, and wipe lightly after wringing well. Then, wipe lightly with a soft, dry cloth.

6-9 Notice of AUTO adjustment

Use of AUTO adjustment with the image through RGB input optimizes V_POSI, H_POSI, H_SIZE and H_PHASE automatically.

In case that projected image has dark tone around its peripheral, AUTO operation sometimes makes artifacts in the image, shifts capture area and so on. Those failures are caused by period of image data is not exactly distinguished to period of blanking on signal processing.

To avoid such phenomena, AUTO function should be used with the full size picture that has bright tone on its peripheral.

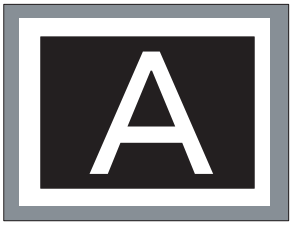


Image when AUTO operates correctly

Image when AUTO fails.

- Noting image of top or bottom lines.
- Shift of the image to East or West.
- Artifacts on image. Etc.

Note

1) The phenomenon at the failure of AUTO adjustment depends on resolution of input source, scene of picture etc.
2) There is no failure above in AUTO with video source through VIDEO, S-VIDEO or COMPONENT input. The reason is why recognition of input signal's standard does not need to search the capture range from input signal itself.

6-10 How to inactivate the security functions

This projector is equipped with security functions.

(1)MyScreen PASSWORD

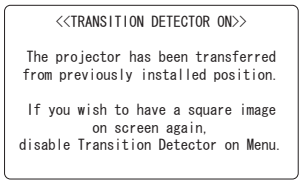
The MyScreen PASSWORD function can be used to prohibit access to the MyScreen function and prevent the currently registered MyScreen image from being overwritten.

(2)PIN LOCK

PIN LOCK is a function which prevents the projector from being used unless a registered Code is input.

(3)Transition detector

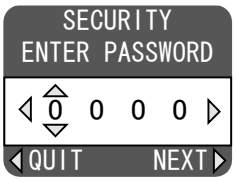
Transition detector is a function which prevents the projector from being used if vertical angle of the projector and mirror setting is not same with recorded.



Transition Detector Alarm

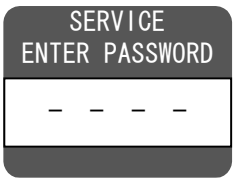
It is possible to inactivate all security functions temporarily with following procedures.

(1) Go to “SECURITY” on OPTION Menu and press the ► button.
Then, ENTER PASSWORD box will be displayed.
(The BOX will be displayed by pressing the [MENU] button (remote) or [▲/▼/◄/►] button (keypad) when Transition Detector Alarm is displayed.)



ENTER PASSWORD box

(2) Press the [Magnify off] button once, then press [Magnify off] button of remote for 3 second or more to display SERVICE PASSWORD box.



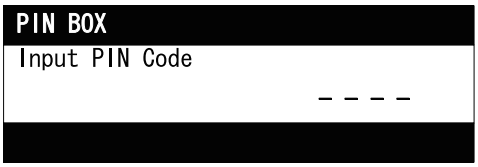
SERVICE PASSWORD box

(3) Enter the Life Key (MENU, ▼, KEYSTONE, ▲). Then all security functions will be inactivated temporarily.

Note: • The Life key can be used up to 30 times. The key cannot be used thereafter. If the Life key cannot be used, see the paragraph of SECURITY in the User’s Manual.
The frequency in which Life key is input will be set to 0 after the registered code is input.
- The SECURITY Menu can not be operated if the SECURITY PASSWORD was released by Life key.
- The Mirror, Keystone and Auto keystone are not memorized though they are possible to operate if Transition Detector was released by Life key.
- The MyScreen Lock on SCREEN Menu keeps “TURN ON” if MyScreen PASSWORD was set when SECURITY PASSWORD was released by Life key.

6-11 PIN LOCK System

If the following PIN BOX menu appears after power on the projector, the PIN LOCK system has been activated. Under such a condition, key operations and signal displaying are inhibited. To open the PIN LOCK system, we need to input the correct 4 digits PIN CODE. If correct PIN CODE is not input in 5 min., the lamp will be automatically turned off.



PIN BOX

Returning repaired unit

Use the Master PIN code. See the paragraph of Releasing the PIN LOCK system inactivation.

Swap unit/Returned unit

Release all security systems. See the paragraph of the PIN LOCK system inactivation.

Releasing the PIN LOCK System

When the PIN BOX menu is displayed, sequentially enter the codes with remote controller as follows. In accordance with remote controller button entry, "∗" mark appears in the PIN BOX menu.

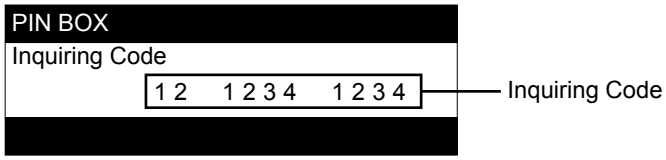
Master PIN codes

1st entry code: Press the "MENU" button.
2nd entry code: Press the "▼" button.
3rd entry code: Press the "KEYSTONE" button.
4th entry code: Press the "▲" button.

Note: The Master PIN codes can be used up to 30 times. The codes cannot be used thereafter. If the Master PIN codes cannot be used, see the paragraph of the PIN LOCK system inactivation.

The PIN LOCK System inactivation

1. When the PIN BOX menu is displayed, press "RESET" for 3 seconds or more in order to get the ID Inquiring Code.



PIN BOX (ID Inquiring Code)

2. Send HITACHI sales company the Inquiring code (10 digits) to inquire the correct PIN code.
3. With the PIN BOX menu displayed, input the correct PIN code. Enter the correct PIN CODE that HITACHI sales company informed.
4. Open menu and select "TURN OFF" from the PIN LOCK items in the SECURITY menu. Then the PIN BOX menu appears.
   Password is required to display the Security Menu.
   See the Security in OPTION menu: User's Manual - Operating Guide.
5. Input the correct PIN code in the PIN BOX menu.
6. And then, PIN LOCK will be set to "TURN OFF".
7. Inactivate the MyScreen PASSWORD and Transition Detector too.
   And reset the Security Password to the [2400].
   See the Security in OPTION menu: User's Manual - Operating Guide.

6-12 Related Messages

When the unit's power is on, messages such as those shown below may be displayed. When any such message is displayed on the screen, please respond as described below.

Although these messages will be automatically disappeared around several minutes, it will be reappeared every time the power is turned on.

Message	Description
NO INPUT IS DETECTED ***	**There is no input signal.** Please confirm the signal input connection, and the status of the signal source.
SYNC IS OUT OF RANGE *** fH *****kHz fV *****Hz	**The horizontal or vertical frequency of the inputted signal is outside of the response parameters of this unit.** Please confirm the specs for this unit or the signal source specs.
CHECK THE AIR FLOW	**The internal portion temperature is rising.** Please turn the power OFF, and allow the unit to cool down at least 20 minutes. After having confirmed the following items, please turn the power ON again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please set FAN SPEED of the SERVICE item in the OPTION menu to HIGH.
REMINDER ***HRS PASSED AFTER THE LAST FILTER CHECK. FILTER MAINTENANCE IS ESSENTIAL TO REMOVE WARNING MESSAGE, RESET FILTER TIMER. SEE MANUAL FURTHER INFO.	**A note of precaution when cleaning the air filter.** Please immediately turn the power OFF, and clean or change the air filter by referring to the "Air Filter" section of this manual. After you have cleaned or changed the air filter, please be sure to reset the filter timer.

6-13 Regarding the indicator lamps

Lighting and flashing of the POWER indicator, the LAMP indicator, and the TEMP indicator have the meanings as described in the table below. Please respond in accordance with the instructions within the table.

POWER indicator	LAMP indicator	TEMP indicator	Description
Lighting In Orange	Turned off	Turned off	**The projector is in a standby state.**
Blinking In Green	Turned off	Turned off	**The projector is warming up.** Please wait.
Lighting In Green	Turned off	Turned off	**The projector is in an on state.** Ordinary operations may be performed.
Blinking In Orange	Turned off	Turned off	**The projector is cooling down.** Please wait.
Blinking In Red	(discretionary)	(discretionary)	**The projector is cooling down. A certain error has been detected.** Please wait until the POWER indicator finishes blinking, and then perform the proper measure using the item descriptions below.
Blinking In Red or Lighting In Red	Lighting In Red	Turned off	**The lamp does not light, and there is a possibility that interior portion has become heated.** Please turn the power off, and allow the projector to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35ºC? If the same indication is displayed after the remedy, please change the lamp referring to the section “Lamp”.
Blinking In Red or Lighting In Red	Blinking In Red	Turned off	**The lamp cover has not been properly fixed (attached).** Please turn the power off, and allow the unit to cool down at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp cover. After performing any needed maintenance, turn the power on again.
Blinking In Red or Lighting In Red	Turned off	Blinking In Red	**The cooling fan is not operating.** Please turn the power off, and allow the unit to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation that no foreign matter has become caught in the fan, etc., and then turn the power on again. If the same indication is displayed after the remedy, please replace a fan.
Blinking In Red or Lighting In Red	Turned off	Lighting In Red	**There is a possibility that the interior portion has become heated.** Please turn the power off, and allow the unit to cool down at least 20 minutes. After the projector has sufficiently cooled down, please make confirmation of the following items, and then turn the power on again. • Is there blockage of the air passage aperture? • Is the air filter dirty? • Does the peripheral temperature exceed 35°C? If the same indication is displayed after the remedy, please set the FAN SPEED of the SERVICE item in the OPTION menu to HIGH.
Lighting In Green	Alternative blinking in Red		**There is a possibility that the interior portion has become overcooled.** Please use the unit within the usage temperature parameters (5°C to 35°C). After the treatment, resent the power to ON. If the same indication is displayed after the treatment, please make sure that the proper cables are connected to each of connectors E301, E302 and E304 on the PWB assembly MAIN.
Lighting In Green	Simultaneous blinking in Red		**It is time to clean the air filter.** Please immediately turn the power OFF, and clean or change the air filter referring to the section “Air Filter”. After cleaning or change the air filter, please be sure to reset the filter timer. After the remedy, resent the power to ON.
Blinking in Green for approx. 3 seconds	Turned **off**	Turned **off**	**At least 1 "Power ON" schedule is saved to the projector.** (Please refer to the User's Manual Network Functions: Schedule Settings for more information)

NOTE • When the interior portion has become overheated, for safety purposes, the power source is automatically turned off, and the indicator lamps may also be turned off. In such a case, press the “○” (OFF) side of the power switch, and wait at least 45 minutes. After the projector has sufficiently cooled down, please make confirmation of the attachment state of the lamp and lamp cover, and then turn the power on again.

6-14 HIDDEN SERVICE MENU

To display the OSD for “HIDDEN SERVICE MENU” set up.

HIDDEN SERVICE	
AIR-SENSOR	EXECUTE
LAMP ALARM	NONE
M1 In EQ	8
M1 PLL Band	4M
M1 PLL Zone	Auto
M1 Out EQ	Short
PJLink	Turn off
STARTUP TYPE	1
SOFT RESET	

By the control panel	By the remote control transmitter
1. Display the Advanced menu by the “MENU” button.(If EASY MENU appears, choose “Go to Advanced menu” to display ADVANCED MENU.) 2. Select the “OPTION” on the menu. 3. Continue press the button [◀] first, then press the button [◀] together with “INPUT”, and hold for 3 seconds.	1. Display the menu by the “MENU” button. (If EASY MENU appears, choose “Go to Advanced menu” to display ADVANCED MENU.) 2. Select the “OPTION” on the menu. 3. Press the “MAGNIFY OFF” button. Next hold the “MAGNIFY OFF” button for 3 seconds.

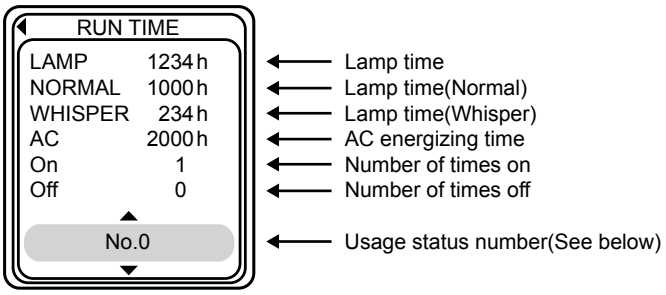
● SOFT RESET

If this is executed, all of the user data is initialized.Never use it when not required.

6-15 RUN TIME window

● Set operating time display method (accumulated lamp time display method)

1. Select “OPTION” from the Advanced menu, then place the cursor on the “LAMP TIME”.
2. Press the [▶], [ENTER] or [RESET] button.
3. Press the [Reset] button once, then press [KEYSTONE] button of the remote control for 3 seconds or more to display the screen shown below. (The menu will close after 10 seconds if there are no further operations.)
4. Use [▲] or [▼] to select the usage status number. (The usage status is as shown below.)



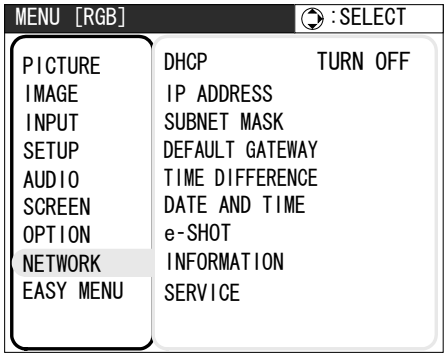
Usage status number

0 ..... Total usage status
1 ..... Current usage status
2 ..... Usage status before first reset
3 ..... Usage status before second reset
||
9 ..... Usage status before eighth reset

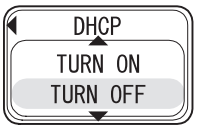
6-16 Reset of the Network Web password / User ID, Network Control password

ATTENTION : Performing this operation initializes the network settings. If the projector has the customized settings in the network, make a note of the network settings to restore them before this operation.

1. Display the NETWORK menu.



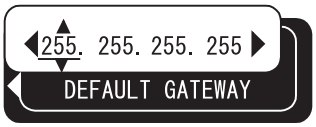
2. Select “TURN OFF” in the item of DHCP.



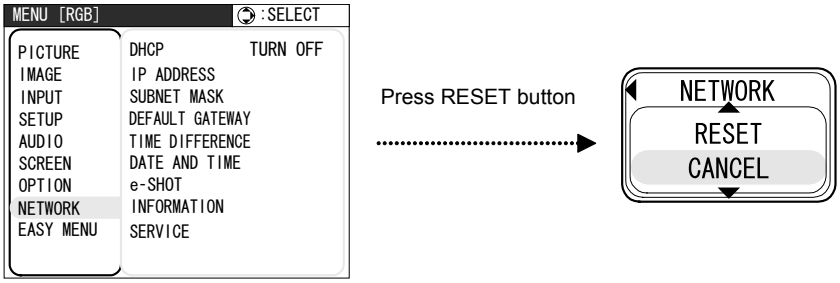
3. Enter “255.255.255.255” in the item of IP ADDRESS.

4. Enter “255.255.255.255” in the item of SUBNET MASK.

5. Enter “255.255.255.255” in the item of DEFAULT GATEWAY.

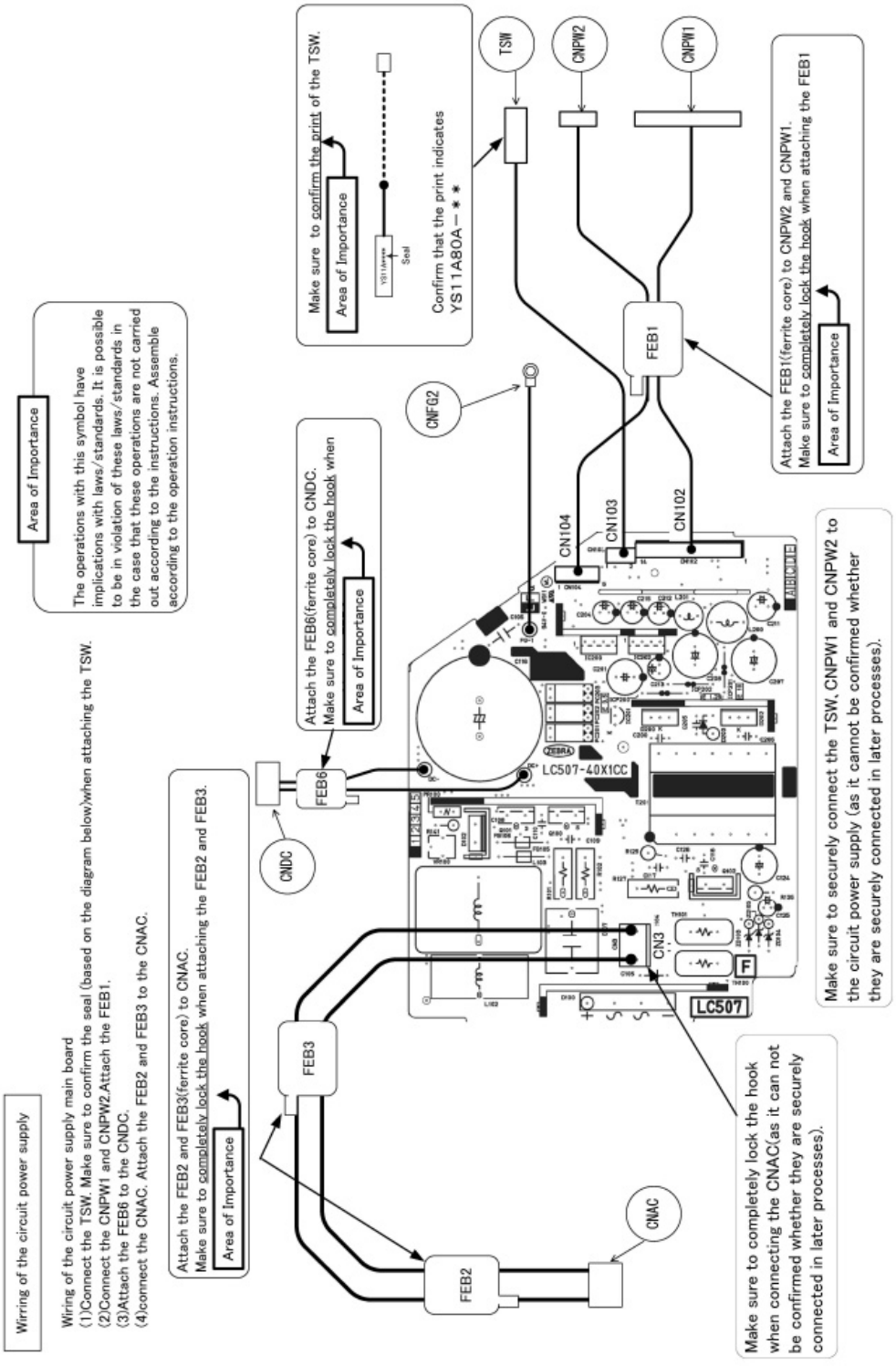


6. While NETWORK menu is displayed, press the RESET button of the remote control.

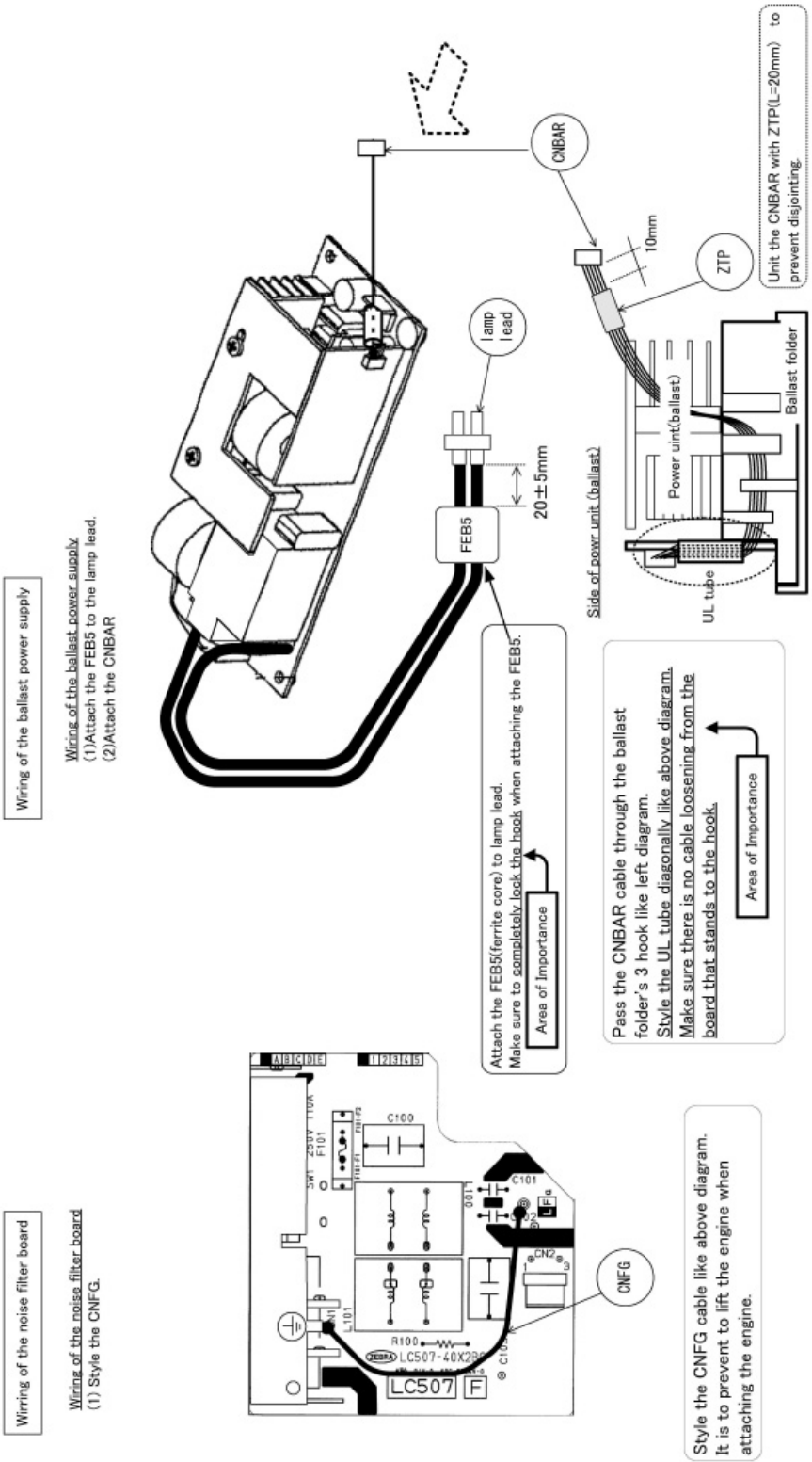


7. Press ▲ button to execute reset.
   The operation described above resets not only Web password but also NETWORK settings.
   NOTE:
   When you execute this reset operation with any other settings than above (described in the step 2 to 5), the WEB password, SNTP server address, DATE AND TIME and other schedule settings are not initialized, but the network settings (DHCP, IP ADDRESS, SUBNET MASK and DEFAULT GATEWAY) are initialized.
8. If the network settings had been customized, restore them by manual operation.

7. Wiring diagram


Wirring of the circuit power supply
Wiring of the circuit power supply main board
(1)Connect the TSW. Make sure to confirm the seal (based on the diagram below)when attaching the TSW.
(2)Connect the CNPW1 and CNPW2.Attach the FEB1.
(3)Attach the FEB6 to the CNDC.
(4)connect the CNAC. Attach the FEB2 and FEB3 to the CNAC.
Area of Importance
The operations with this symbol have implications with laws/standards. It is possible to be in violation of these laws/standards in the case that these operations are not carried out according to the instructions. Assemble according to the operation instructions.
Attach the FEB2 and FEB3(ferrite core) to CNAC.
Make sure to completely lock the hook when attaching the FEB2 and FEB3.
Area of Importance
Attach the FEB6(ferrite core) to CNDC.
Make sure to completely lock the hook when
Area of Importance
Make sure to confirm the print of the TSW.
Area of Importance
Seal
Confirm that the print indicates
YS11A80A－＊＊
Attach the FEB1(ferrite core) to CNPW2 and CNPW1.
Make sure to completely lock the hook when attaching the FEB1
Area of Importance
Make sure to completely lock the hook when connecting the CNAC(as it can not be confirmed whether they are securely connected in later processes).
Make sure to securely connect the TSW, CNPW1 and CNPW2 to the circuit power supply (as it cannot be confirmed whether they are securely connected in later processes).
TSW
CNPW2
CNPW1
CNFG2
FEB1
FEB2
FEB3
FEB6
CNDC
CNAC
CN104
CN103
CN102
CN3
LC507-40X1CC
LC507

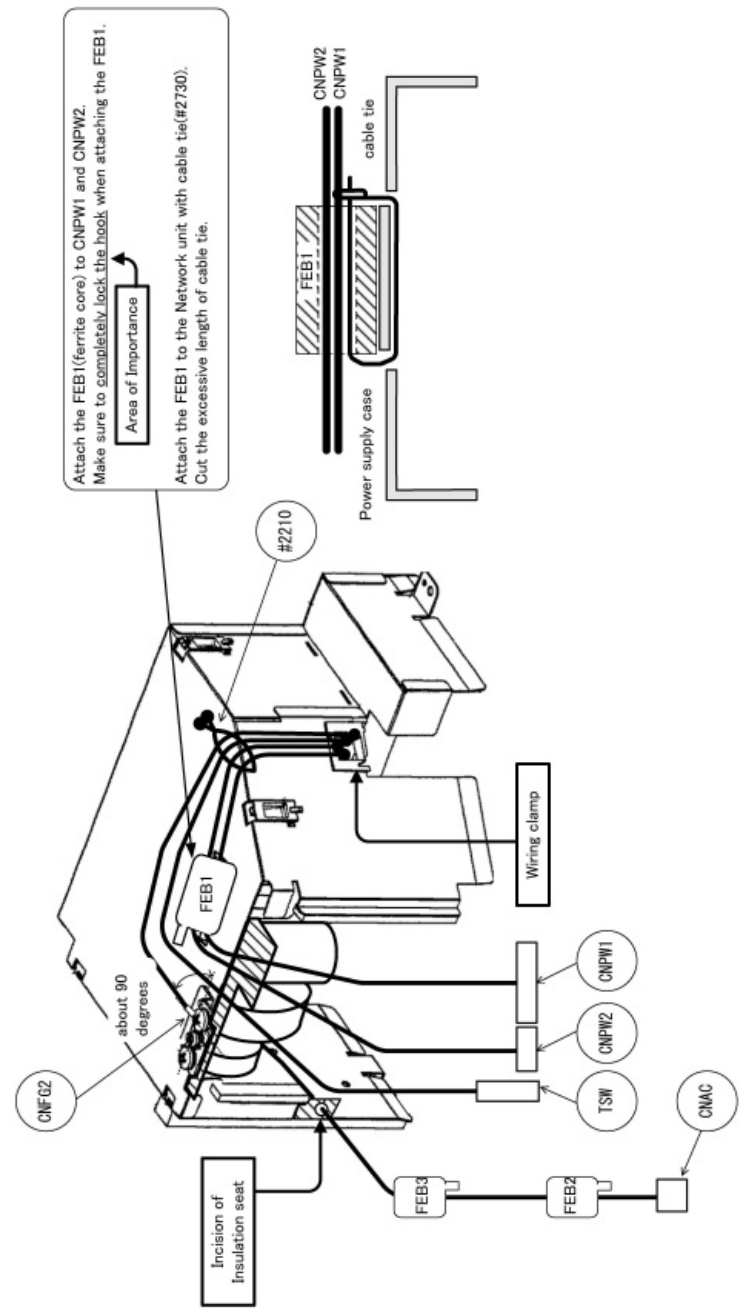
Wiring diagram 1


Wiring of the ballast power supply
Wiring of the ballast power supply.
(1)Attach the FEB5 to the lamp lead.
(2)Attach the CNBAR
CNBAR
lamp lead
FEB5
20±5mm
Side of powr unit (ballast)
Power uint(ballast)
10mm
ZTP
Ballast folder
UL tube
Unit the CNBAR with ZTP(L=20mm) to prevent disjointing.
Attach the FEB5(ferrite core) to lamp lead.
Make sure to completely lock the hook when attaching the FEB5.
Area of Importance
Pass the CNBAR cable through the ballast folder's 3 hook like left diagram.
Style the UL tube diagonally like above diagram.
Make sure there is no cable loosening from the board that stands to the hook.
Area of Importance
Wiring of the noise filter board
Wiring of the noise filter board
(1) Style the CNFG.
LC507
F
CNFG
Style the CNFG cable like above diagram.
It is to prevent to lift the engine when attaching the engine.

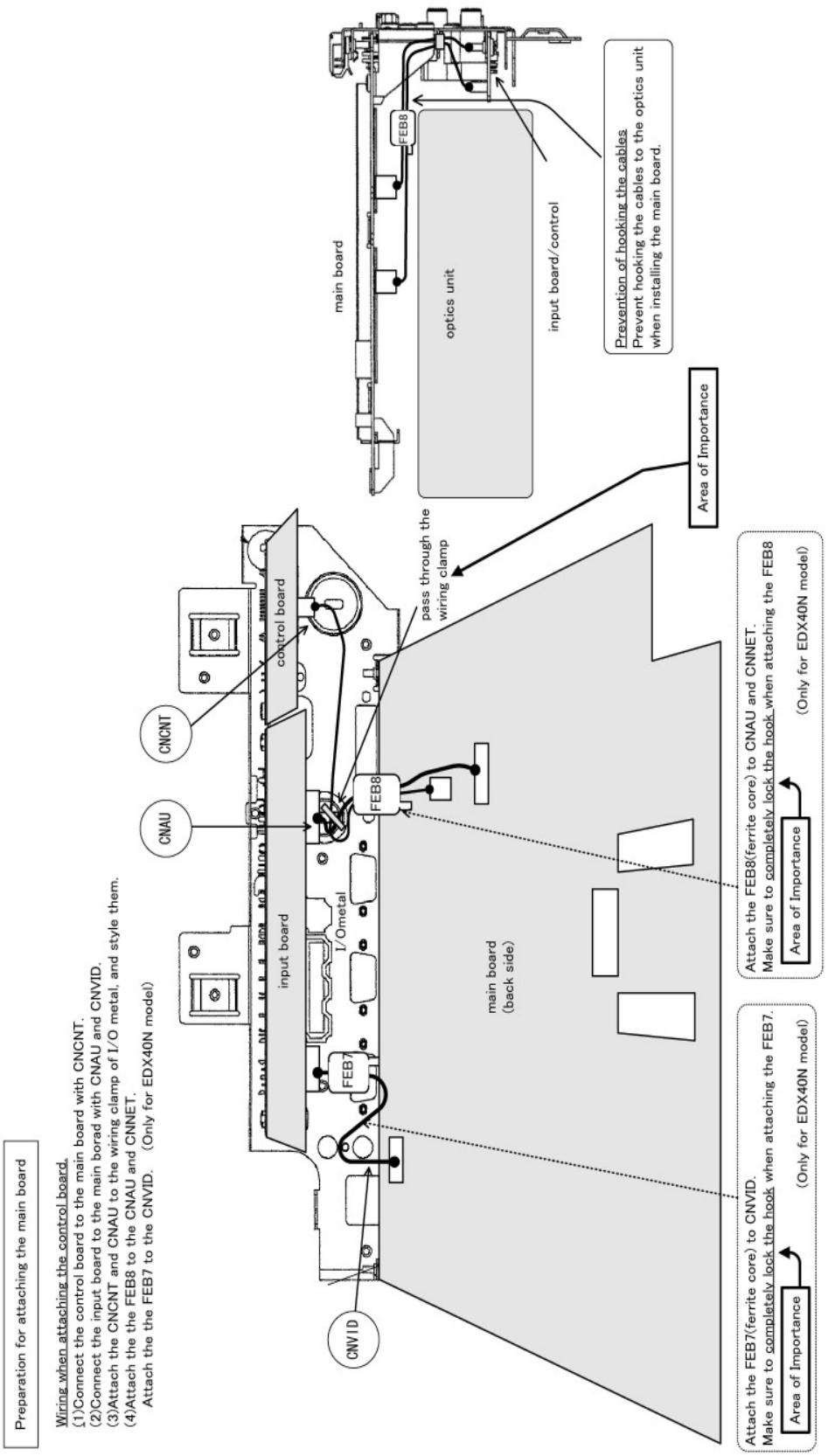
Wiring diagram 2

Wiring of the power supply block

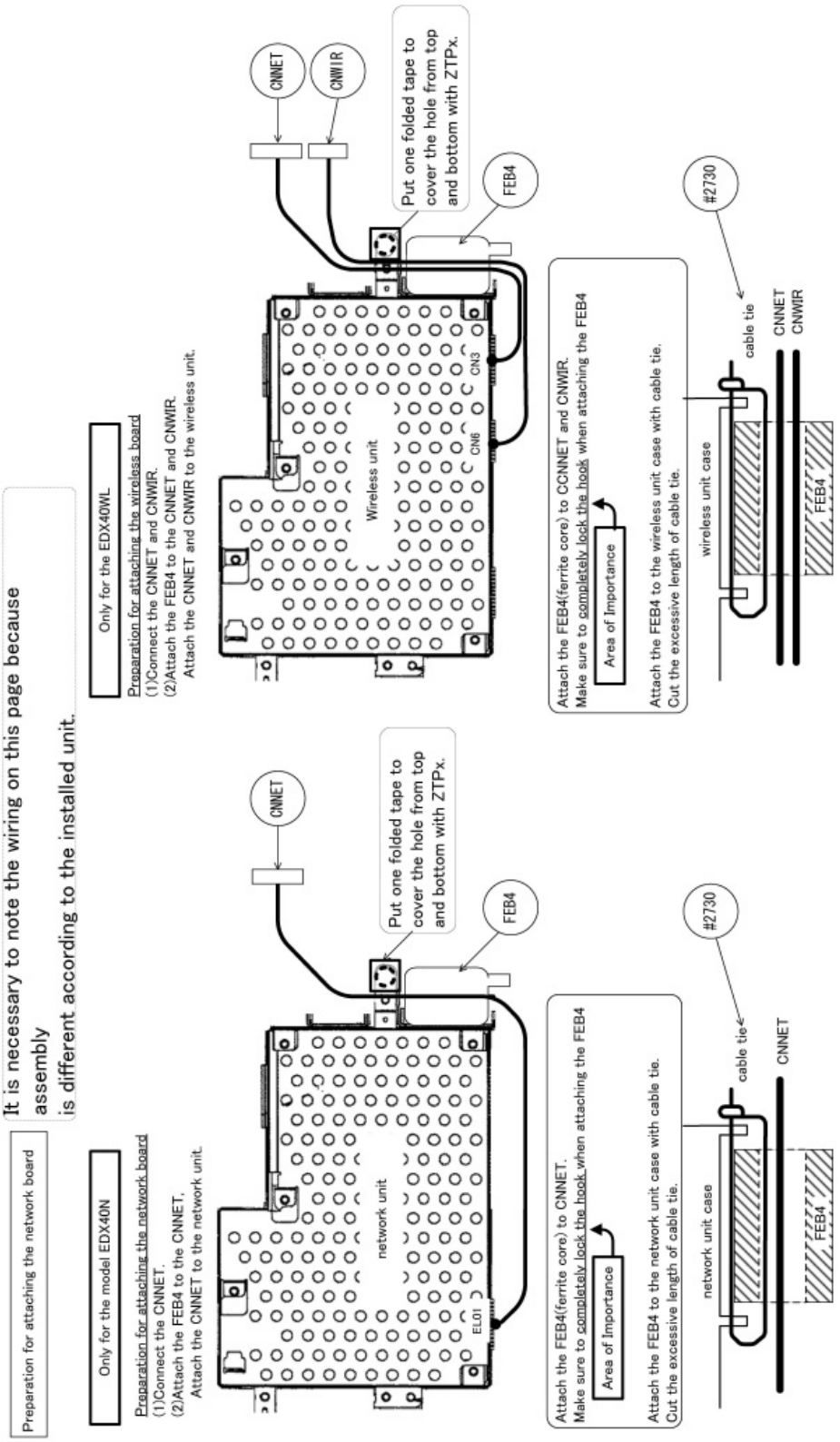
Wiring of the power supply block
(1)Pass the CNPW1,CNPW2,TSW and CNFG2 through the wiring clamp of power supply case.
(2)Attach the FEB1 to the CNPW1and CNPW2.
(3)Attach the FEB1 to the upper surface of power supply case with cable tie.
(4)bundle the CNPW1,CNPW2,TSW and CNFG2 with clamp .
(5)Attach the CNFG2 to the power supply case with screw.
(6)Pass the CNAC through the incision of insulation seat.



Wiring diagram 3


Preparation for attaching the main board
Wiring when attaching the control board.
(1)Connect the control board to the main board with CNCNT.
(2)Connect the input board to the main borad with CNAU and CNVID.
(3)Attach the CNCNT and CNAU to the wiring clamp of I/O metal, and style them.
(4)Attach the the FEB8 to the CNAU and CNNET.
Attach the the FEB7 to the CNVID. (Only for EDX40N model)
CNCNT
CNAU
CNVID
control board
input board
I/Ometal
FEB7
FEB8
main board
(back side)
pass through the
wiring clamp
Area of Importance
main board
optics unit
input board/control
FEB8
Prevention of hooking the cables
Prevent hooking the cables to the optics unit
when installing the main board.
Attach the FEB8(ferrite core) to CNAU and CNNET.
Make sure to completely lock the hook when attaching the FEB8
Area of Importance
(Only for EDX40N model)
Attach the FEB7(ferrite core) to CNVID.
Make sure to completely lock the hook when attaching the FEB7.
Area of Importance
(Only for EDX40N model)

Wiring diagram 4


Preparation for attaching the network board
It is necessary to note the wiring on this page because assembly is different according to the installed unit.
Only for the model EDX40N
Preparation for attaching the network board
(1)Connect the CNNET.
(2)Attach the FEB4 to the CNNET.
Attach the CNNET to the network unit.
CNNET
Put one folded tape to cover the hole from top and bottom with ZTPx.
FEB4
network unit
EL01
Attach the FEB4(ferrite core) to CNNET.
Make sure to completely lock the hook when attaching the FEB4
Area of Importance
Attach the FEB4 to the network unit case with cable tie.
Cut the excessive length of cable tie.
#2730
cable tie
network unit case
CNNET
FEB4
Only for the EDX40WL
Preparation for attaching the wireless board
(1)Connect the CNNET and CNWIR.
(2)Attach the FEB4 to the CNNET and CNWIR.
Attach the CNNET and CNWIR to the wireless unit.
CNNET
CNWIR
Put one folded tape to cover the hole from top and bottom with ZTPx.
FEB4
Wireless unit
CN3
CN6
Attach the FEB4(ferrite core) to CNNET and CNWIR.
Make sure to completely lock the hook when attaching the FEB4
Area of Importance
Attach the FEB4 to the wireless unit case with cable tie.
Cut the excessive length of cable tie.
#2730
cable tie
wireless unit case
CNNET
CNWIR
FEB4

Wiring diagram 5

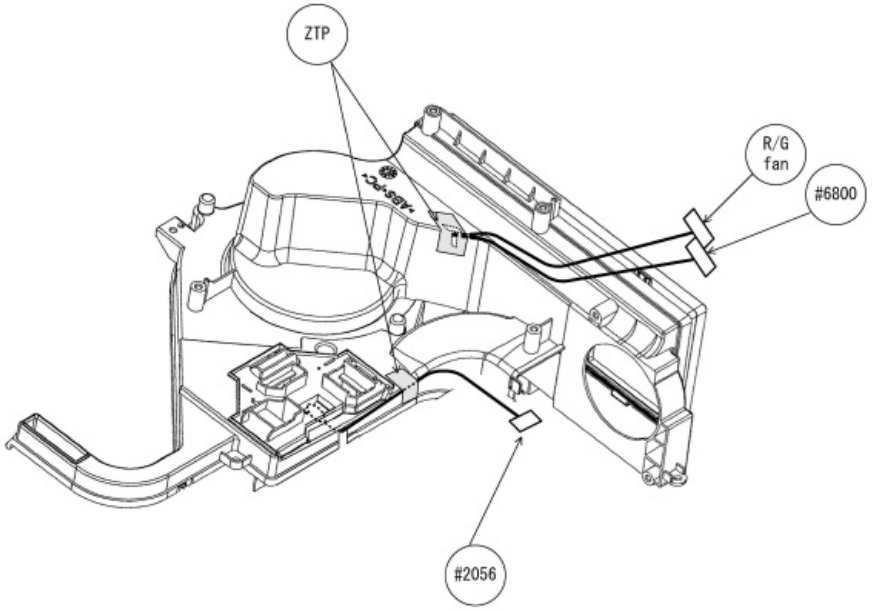
Preparation for attaching the duct

Wiring when attaching the duct

(1)Pass the #2056 through the incision of duct, and attach it to the duct absorbing the excessive length with tape. #2056have to be along the side of duct..

(2)Pass the cable of #6800 and R/G fan through the duct hole, and attach them to the duct absorbing the excessive length with tape.

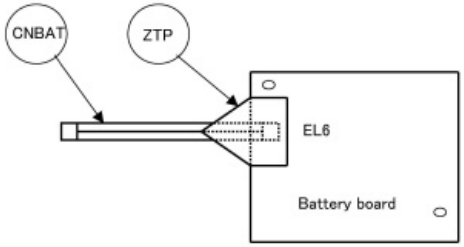
(Cable is fixed with tape, so it is impossible to draw out the cable even if the cable length becomes insufficient at the later procedure.)



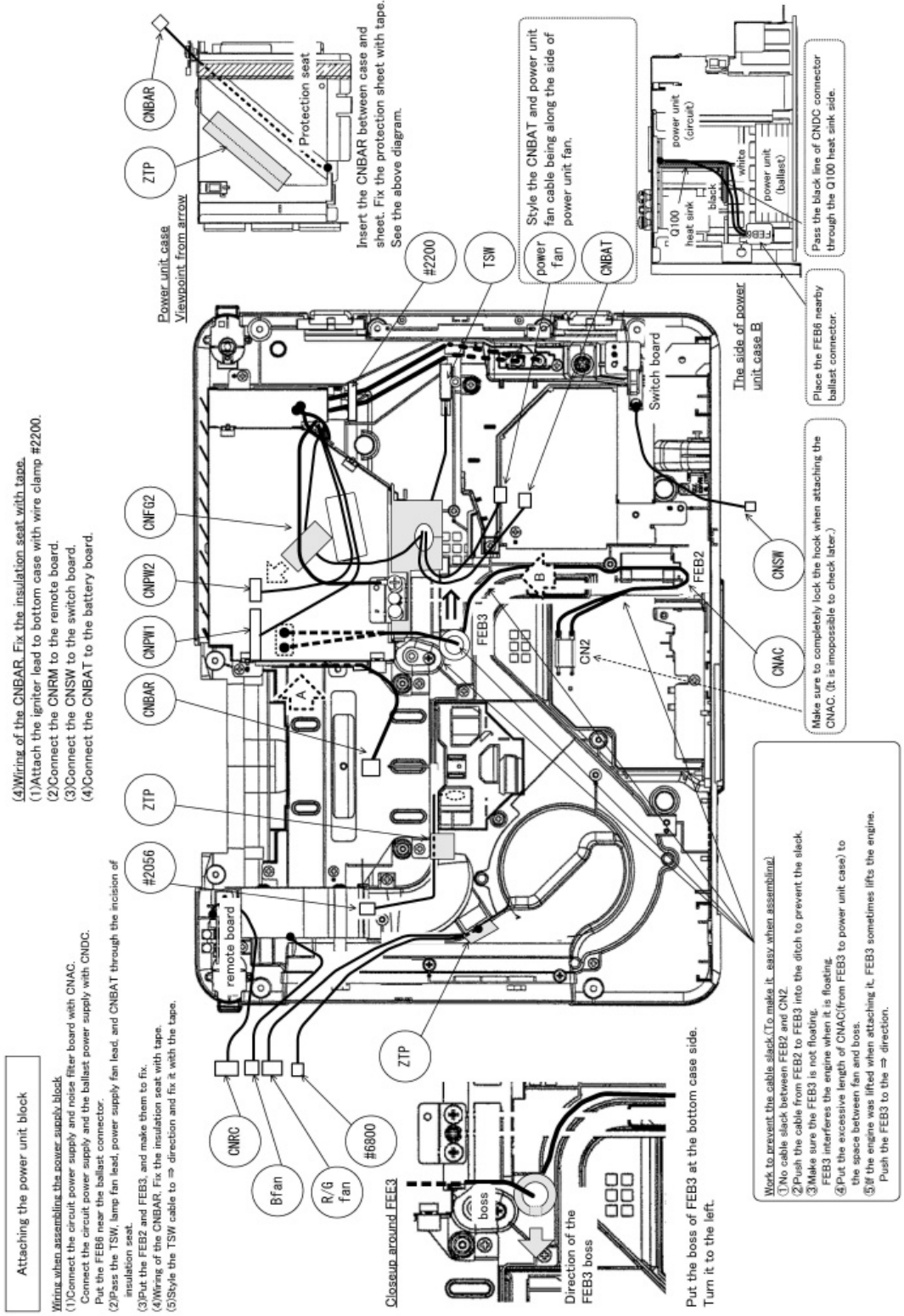
Preparation for attaching the battery board

(This work is not necessary for K2 and K3 model.)

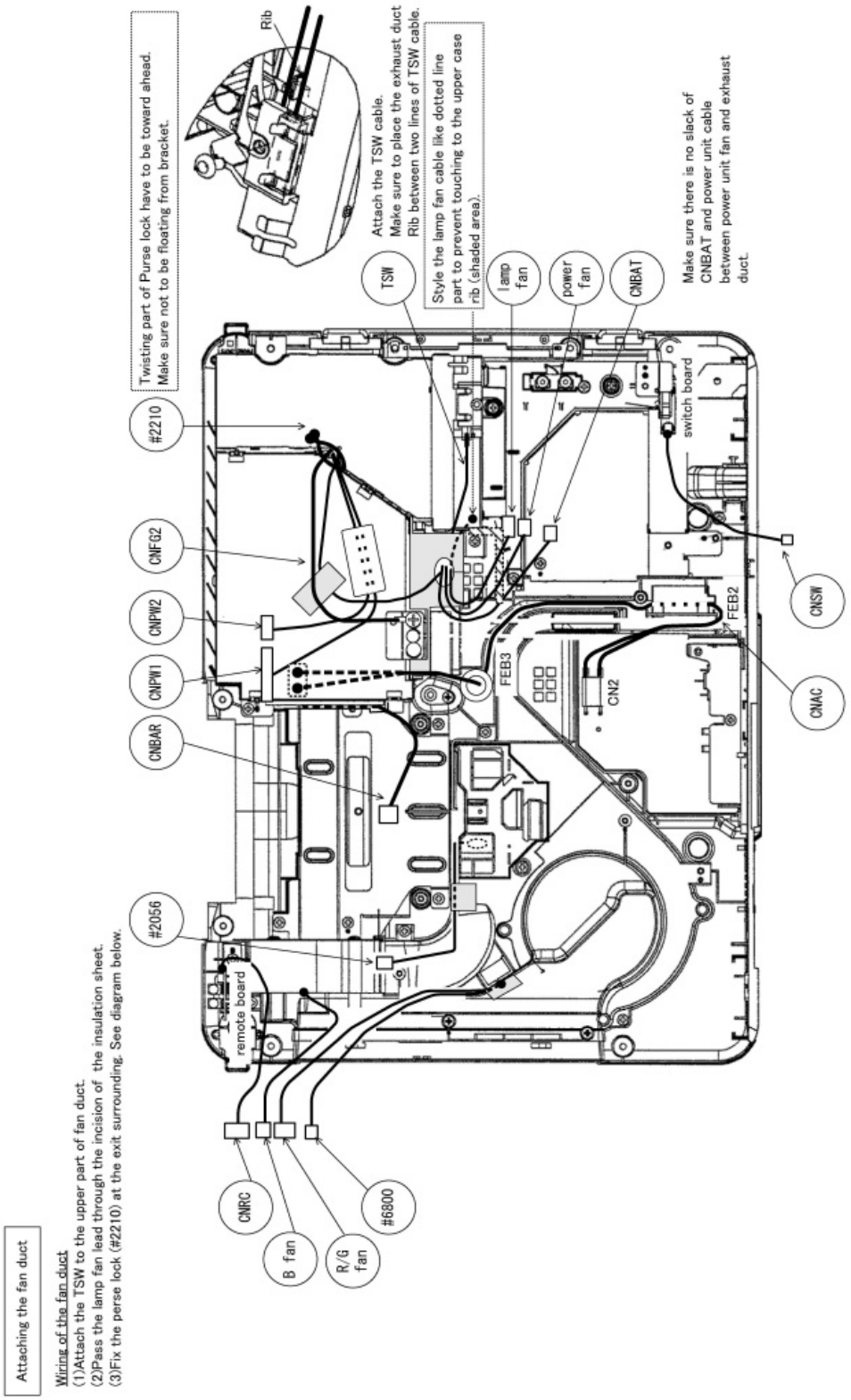
Connect the CNBAT to the battery board first. Unit the connector with tape (L=20mm) to prevent being come off. (Bends the corner of the tape)



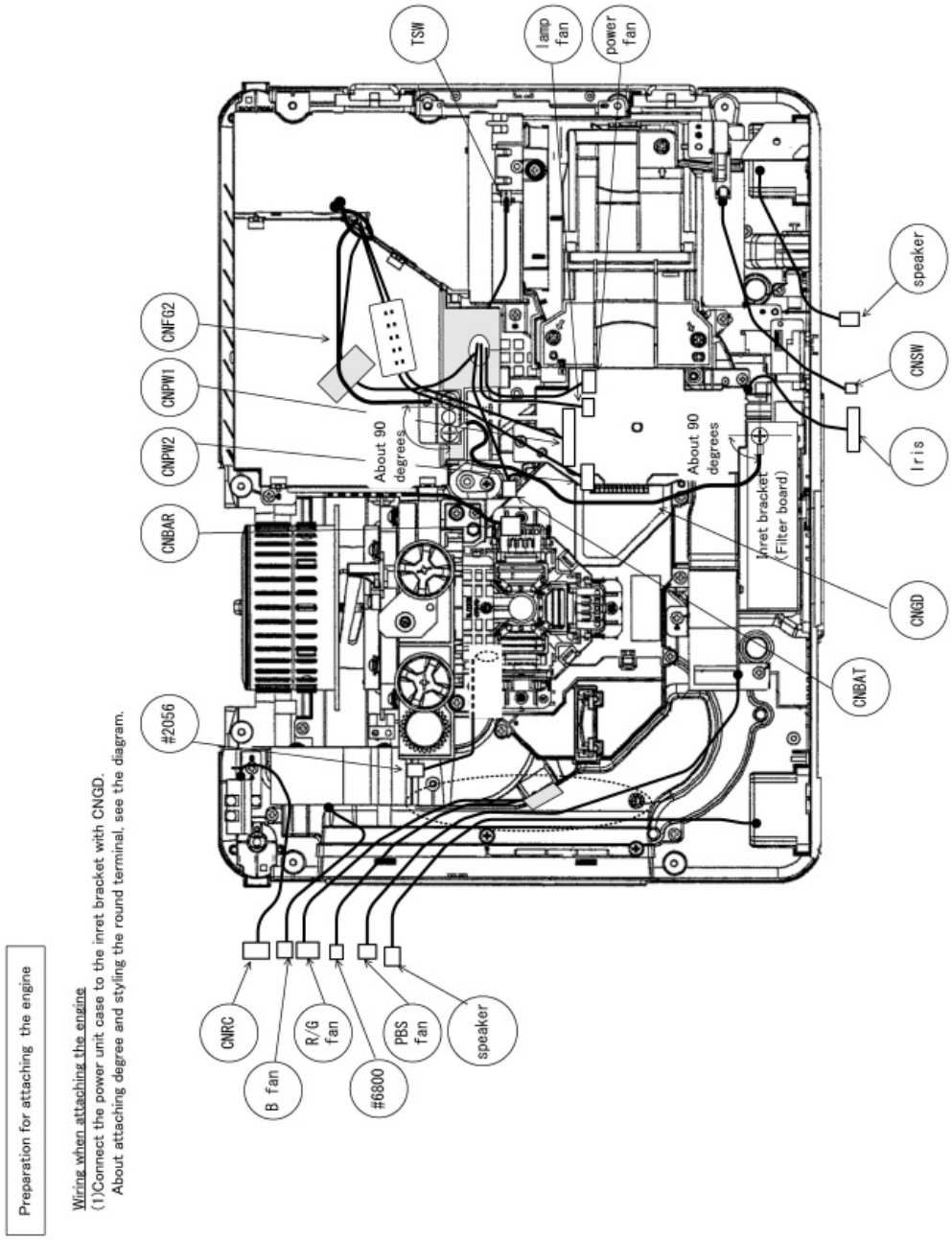
Wiring diagram 6


Attaching the power unit block
Wiring when assembling the power supply block
(1)Connect the circuit power supply and noise filter board with CNAC.
Connect the circuit power supply and the ballast power supply with CNDC.
Put the FEB6 near the ballast connector.
(2)Pass the TSW, lamp fan lead, power supply fan lead, and CNBAT through the incision of insulation seat.
(3)Put the FEB2 and FEB3, and make them to fix.
(4)Wiring of the CNBAR. Fix the insulation seat with tape.
(5)Style the TSW cable to ⇒ direction and fix it with the tape.
(4)Wiring of the CNBAR. Fix the insulation seat with tape.
(1)Attach the igniter lead to bottom case with wire clamp #2200.
(2)Connect the CNRM to the remote board.
(3)Connect the CNSW to the switch board.
(4)Connect the CNBAT to the battery board.
#2056
ZTP
CNBAR
CNPW1
CNPW2
CNFG2
#2200
TSW
power fan
CNBAT
ZTP
CNBAR
Power unit case Viewpoint from arrow
Protection seat
Insert the CNBAR between case and sheet. Fix the protection sheet with tape. See the above diagram.
Style the CNBAT and power unit fan cable being along the side of power unit fan.
Pass the black line of CNDC connector through the Q100 heat sink side.
Place the FEB6 nearby ballast connector.
The side of power unit case B
Switch board
Q100
heat sink
black
white
power unit (circuit)
power unit (ballast)
FEB6
CNRC
Bfan
R/G fan
#6800
ZTP
CNAC
CNSW
FEB2
FEB3
CN2
Make sure to completely lock the hook when attaching the CNAC. (It is impossible to check later.)
Work to prevent the cable slack.(To make it easy when assembling)
①No cable slack between FEB2 and CN2.
②Push the cable from FEB2 to FEB3 into the ditch to prevent the slack.
③Make sure the FEB3 is not floating.
FEB3 interferes the engine when it is floating.
④Put the excessive length of CNAC(from FEB3 to power unit case) to the space between fan and boss.
⑤If the engine was lifted when attaching it, FEB3 sometimes lifts the engine. Push the FEB3 to the ⇒ direction.
Closeup around FEE3
boss
Direction of the FEB3 boss
Put the boss of FEB3 at the bottom case side. Turn it to the left.

Wiring diagram 7


Attaching the fan duct
Wiring of the fan duct
(1)Attach the TSW to the upper part of fan duct.
(2)Pass the lamp fan lead through the incision of the insulation sheet.
(3)Fix the perse lock (#2210) at the exit surrounding. See diagram below.
Twisting part of Purse lock have to be toward ahead.
Make sure not to be floating from bracket.
Rib
Attach the TSW cable.
Make sure to place the exhaust duct Rib between two lines of TSW cable.
Style the lamp fan cable like dotted line part to prevent touching to the upper case rib (shaded area).
Make sure there is no slack of CNBAT and power unit cable between power unit fan and exhaust duct.
#2056
#2210
CNBAR
CNPW1
CNPW2
CNFG2
TSW
lamp fan
power fan
CNBAT
CNSW
CNAC
CNRC
#6800
B fan
R/G fan
remote board
switch board
FEB2
FEB3
CN2

Wiring diagram 8

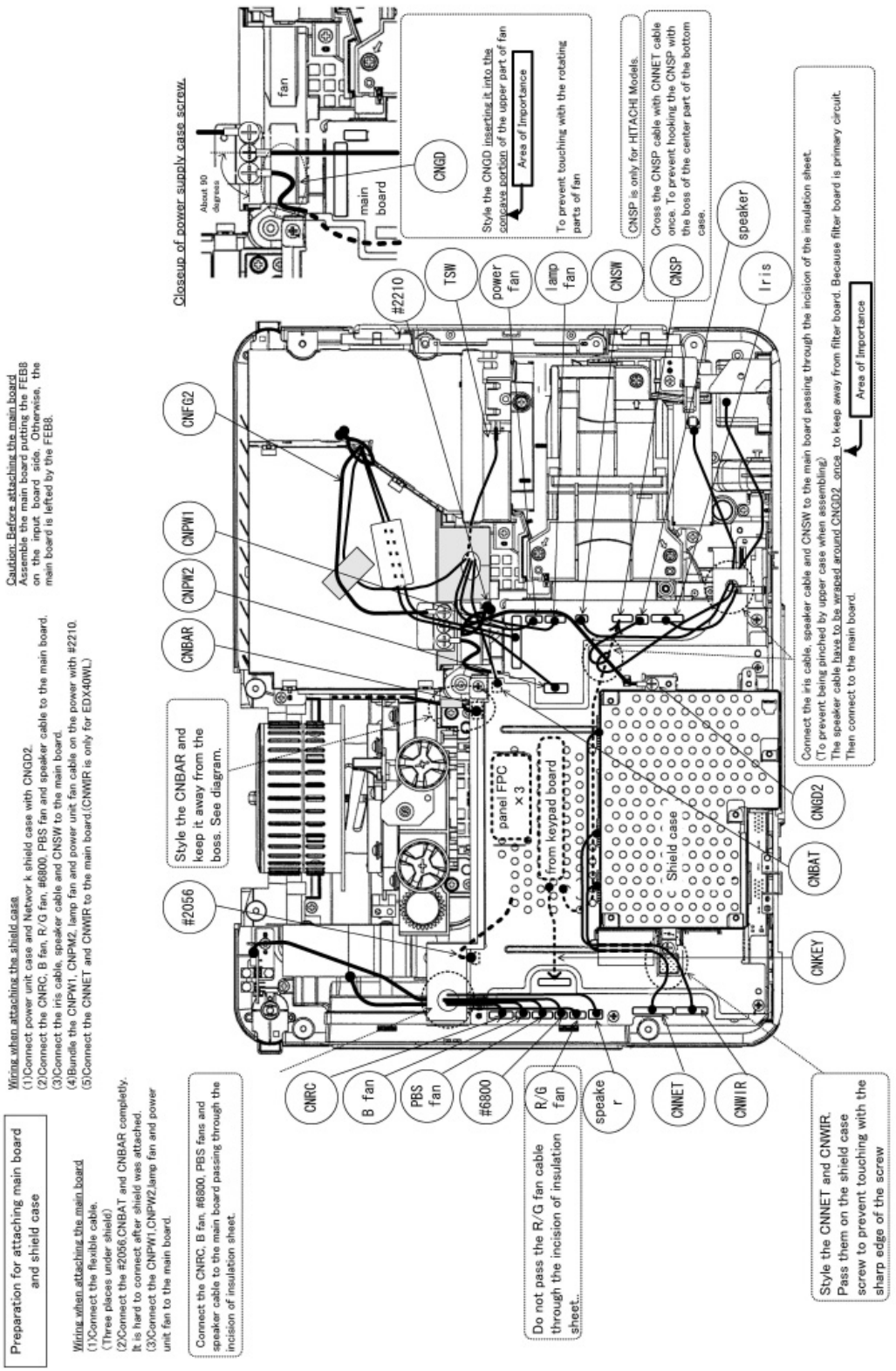


Wiring diagram 9

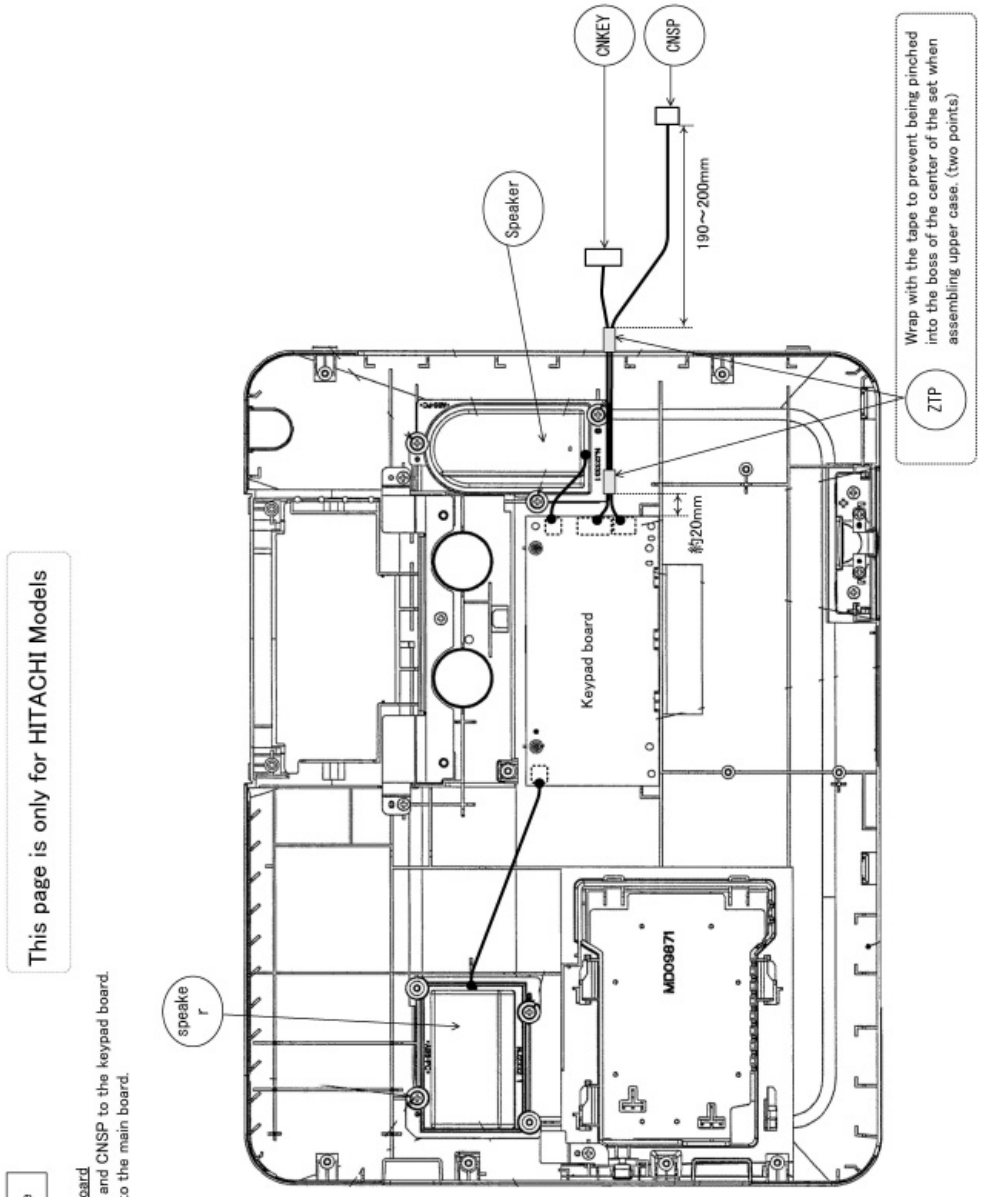
Preparation for attaching the engine

Wiring when attaching the engine

(1)Connect the power unit case to the inret bracket with CNGD.
About attaching degree and styling the round terminal, see the diagram.


Preparation for attaching main board and shield case
Wiring when attaching the main board
(1)Connect the flexible cable.
(Three places under shield)
(2)Connect the #2056,CNBAT and CNBAR completly.
It is hard to connect after shield was attached.
(3)Connect the CNPW1,CNPW2,lamp fan and power unit fan to the main board.
Wiring when attaching the shield case
(1)Connect power unit case and Networ k shield case with CNGD2.
(2)Connect the CNRC, B fan, R/G fan, #6800, PBS fan and speaker cable to the main board.
(3)Connect the iris cable, speaker cable and CNSW to the main board.
(4)Bundle the CNPW1, CNPM2, lamp fan and power unit fan cable on the power with #2210.
(5)Connect the CNNET and CNWIR to the main board.(CNWIR is only for EDX40WL)
Caution: Before attaching the main board
Assemble the main board putting the FEB8 on the input board side. Otherwise, the main board is lefted by the FEB8.
Closeup of power supply case screw.
About 90 degrees
fan
main board
CNGD
Style the CNGD inserting it into the concave portion of the upper part of fan
Area of Importance
To prevent touching with the rotating parts of fan
CNSP is only for HITACHI Models.
Cross the CNSP cable with CNNET cable once. To prevent hooking the CNSP with the boss of the center part of the bottom case.
#2210
TSW
power fan
lamp fan
CNSW
CNSP
speaker
Iris
CNFG2
CNPW1
CNPW2
CNBAR
#2056
Style the CNBAR and keep it away from the boss. See diagram.
panel FPC x3
from keypad board
Shield case
CNKEY
CNBAT
CNGD2
Connect the iris cable, speaker cable and CNSW to the main board passing through the incision of the insulation sheet.
(To prevent being pinched by upper case when assembling)
The speaker cable have to be wraped around CNGD2 once to keep away from filter board. Because filter board is primary circuit.
Then connect to the main board.
Area of Importance
CNRC
B fan
PBS fan
#6800
R/G fan
speake r
CNNET
CNWIR
Connect the CNRC, B fan, #6800, PBS fans and speaker cable to the main board passing through the incision of insulation sheet.
Do not pass the R/G fan cable through the incision of insulation sheet.
Style the CNNET and CNWIR. Pass them on the shield case screw to prevent touching with the sharp edge of the screw

Wiring diagram 10



This page is only for HITACHI Models

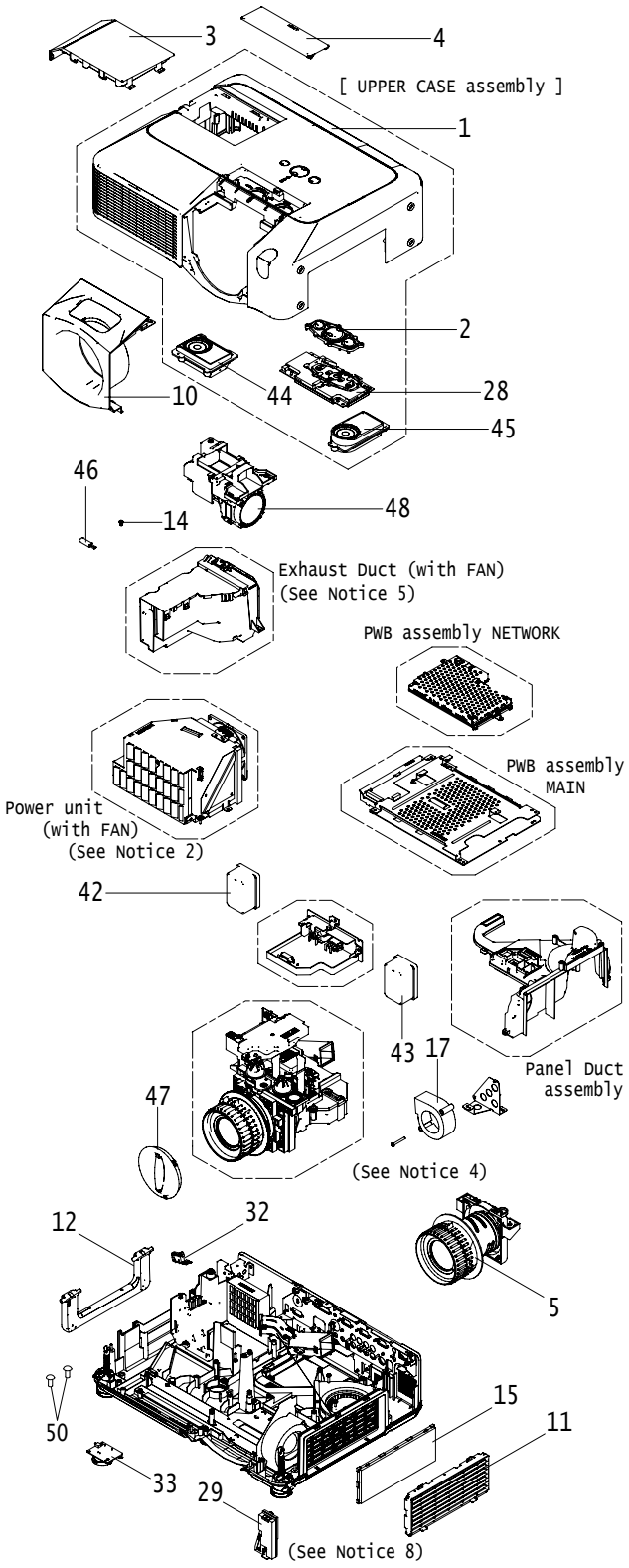
Preparation for attaching upper case

Wiring when attaching the keypad board
(1)Connect speake lead x2, CNKEY and CNSP to the keypad board.
(2)Connect the CNKEY and CNSP to the main board.

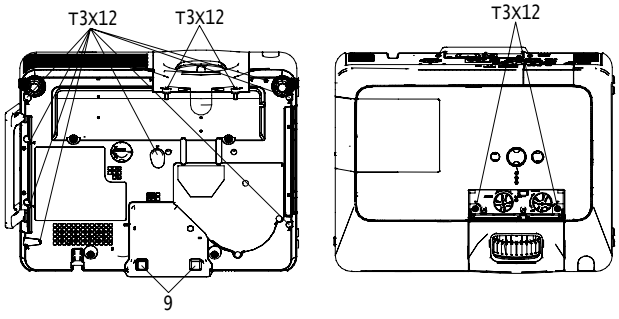
Wiring diagram 11

8. Disassembly diagram

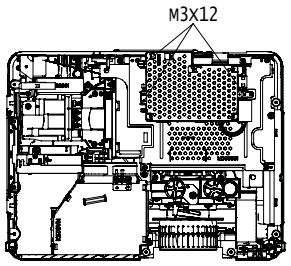
M : Meter Screw
T : Tapping Screw



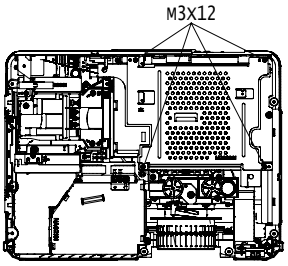
[Remove UPPER CASE] (⚠See Notice 1)



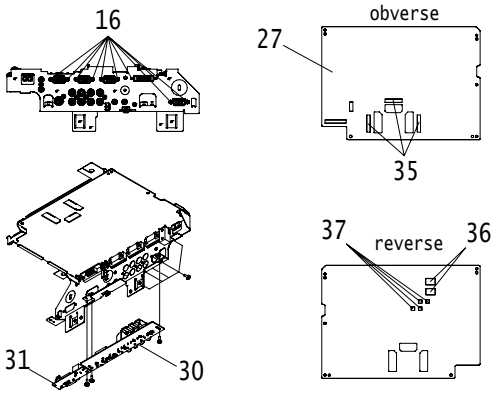
[Remove Network unit]



[Remove Shield of PWB assembly MAIN]

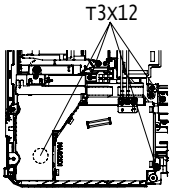


[PWB assembly MAIN]

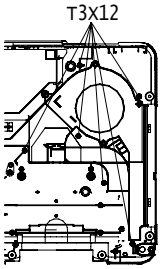


M : Meter Screw
T : Tapping Screw

[Remove Duct and Power unit]

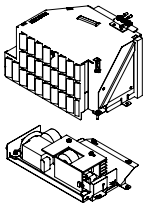


[Remove Panel Duct assembly]
(See Notice 3)

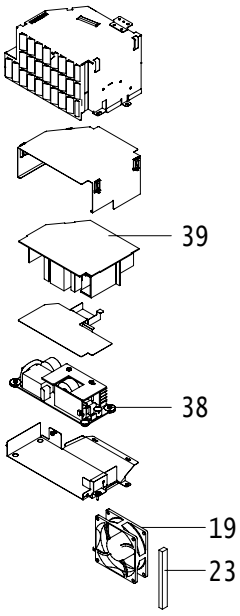


[POWER UNIT]

- assembly -

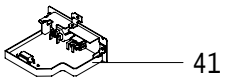


- Disassembly -
(See Notice 7)

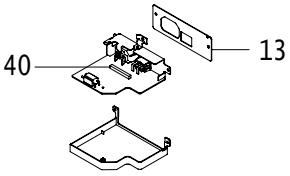


[FILTER UNIT]

- assembly -

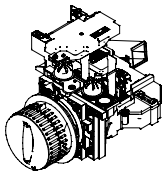


- Disassembly -

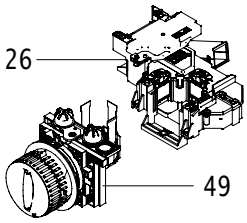


[LCD/LENS/PRISM/
DICHROIC OPTICS UNIT]

- assembly -

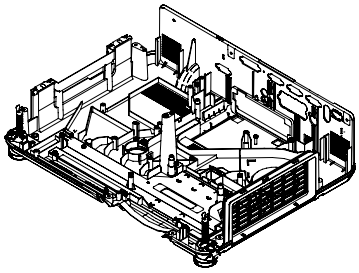


- Disassembly -

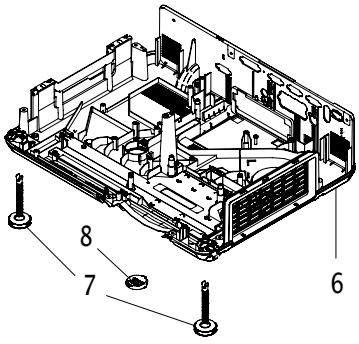


[BOTTOM CASE]

- assembly -

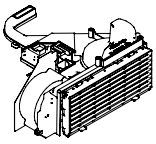


- Disassembly -

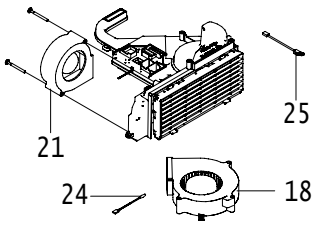


[PANEL DUCT]

- assembly -

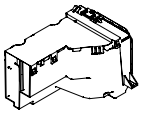


- Disassembly -

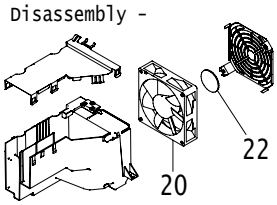


[EXHAUST DUCT]

- assembly -



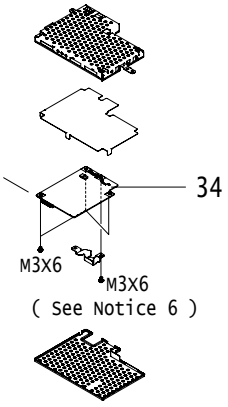
- Disassembly -



[NETWORK UNIT]

- assembly -

- Disassembly -



Notice

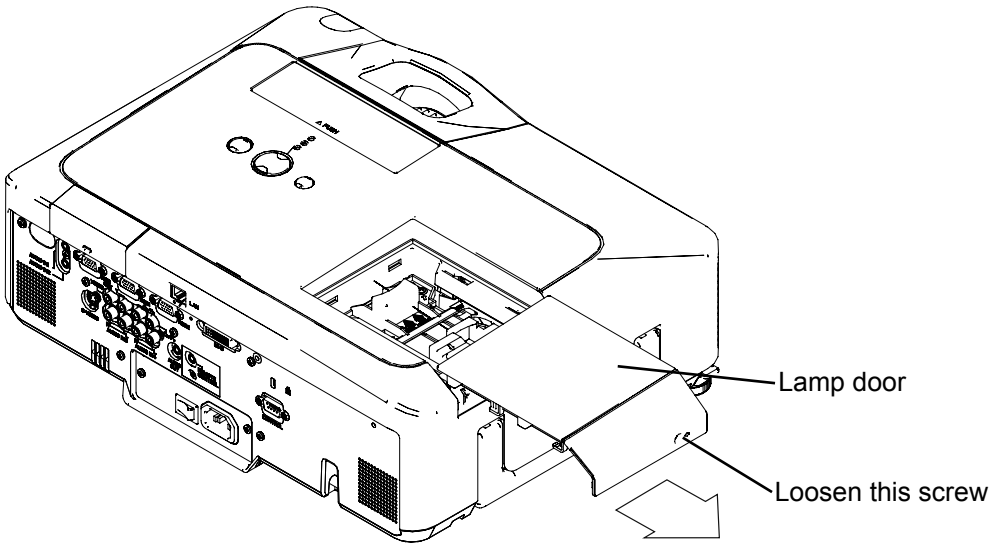
1. Detach and attach the upper case.

Follow the procedure below to detach and attach the upper case.

When disassembling

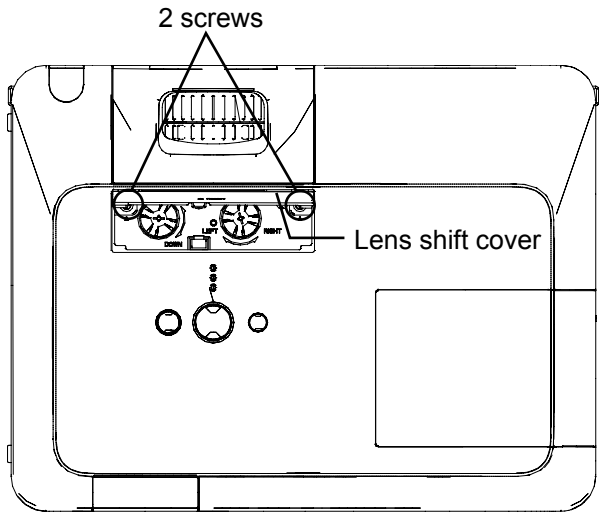
a. Remove the Lamp door.

⚠CAUTION
The lamp door must be removed before the upper case when disassembling the machine. If the upper case is detached with the lamp door installed, the MAIN board might be damaged.

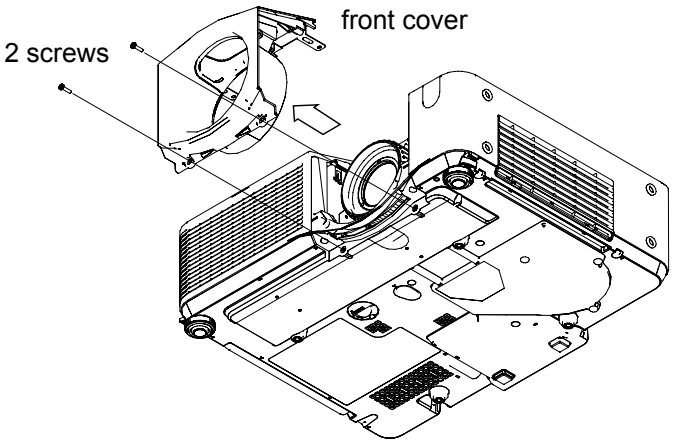


b. Remove 2 screws on the front and 2 screws on the upper case.

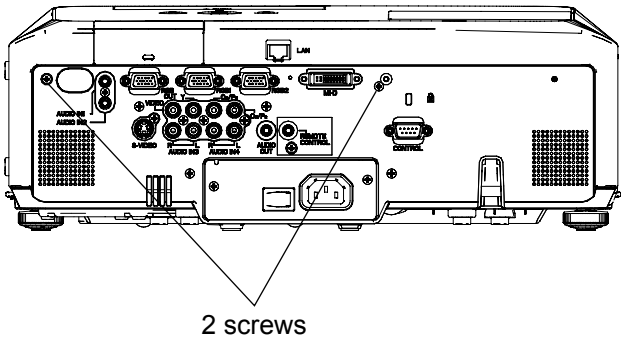
(1) Before remove 2 screws on the upper case, open the Lens shift cover.

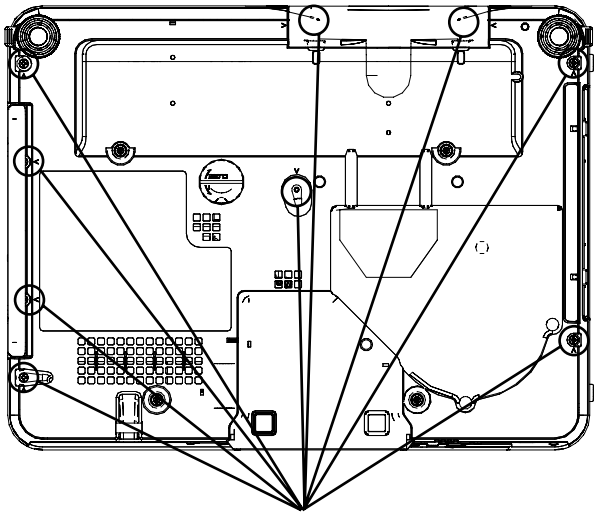


(2) Remove 2 screws on the front.
(3) Remove the front cover.



c. Remove 9 screws on the bottom and 2 screws on the rear to detach the upper case.

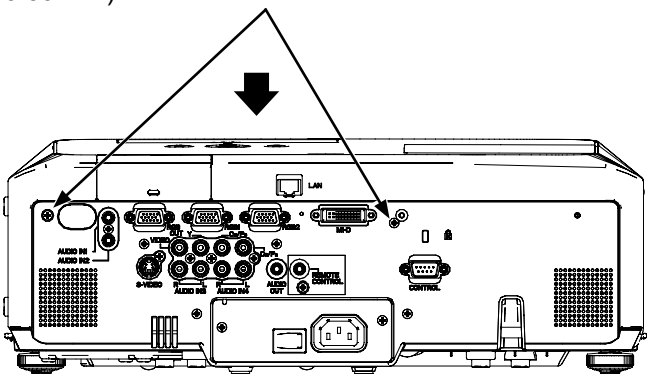




When assembling

a. Tighten 9 screws on the bottom and 2 screws on the rear after attaching the upper case with the lamp door separated.

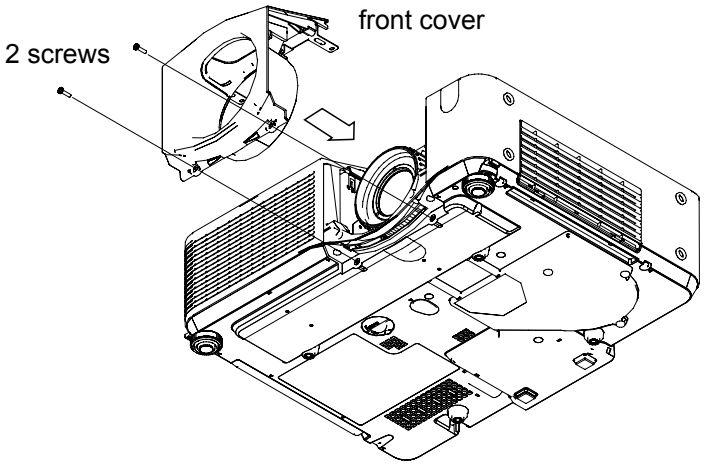
In order not to make a gap between the upper and the bottom cases, tighten these screws while pressing down the upper case in the direction of the arrow. Be careful not to bend the outside casing.(Torque:0.39-0.59N•m)



b. Attach the Front cover.

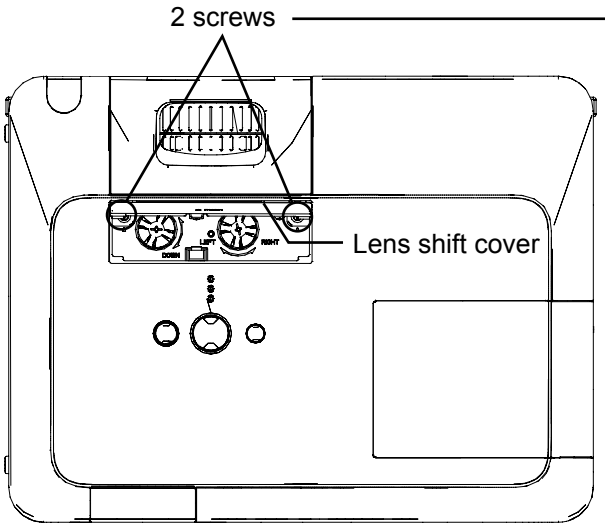
(1) Attach the Front cover.

(2) Tighten 2 screws on the front.



(3) Open the Lens shift cover.

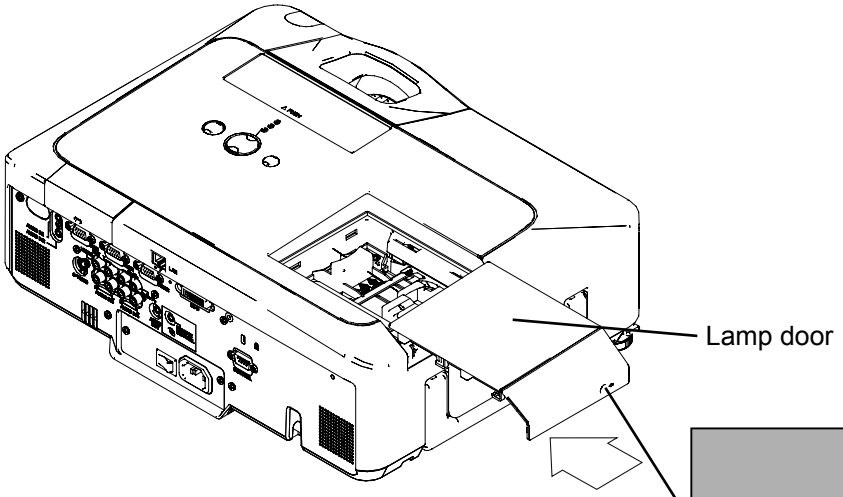
(4) Tighten 2 screws on the upper case.



⚠CAUTION

When re-assembling, tighten these screw at the torque of 0.49±0.1 N•m so that the screw holes are not damaged.

c. Attach the Lamp door.



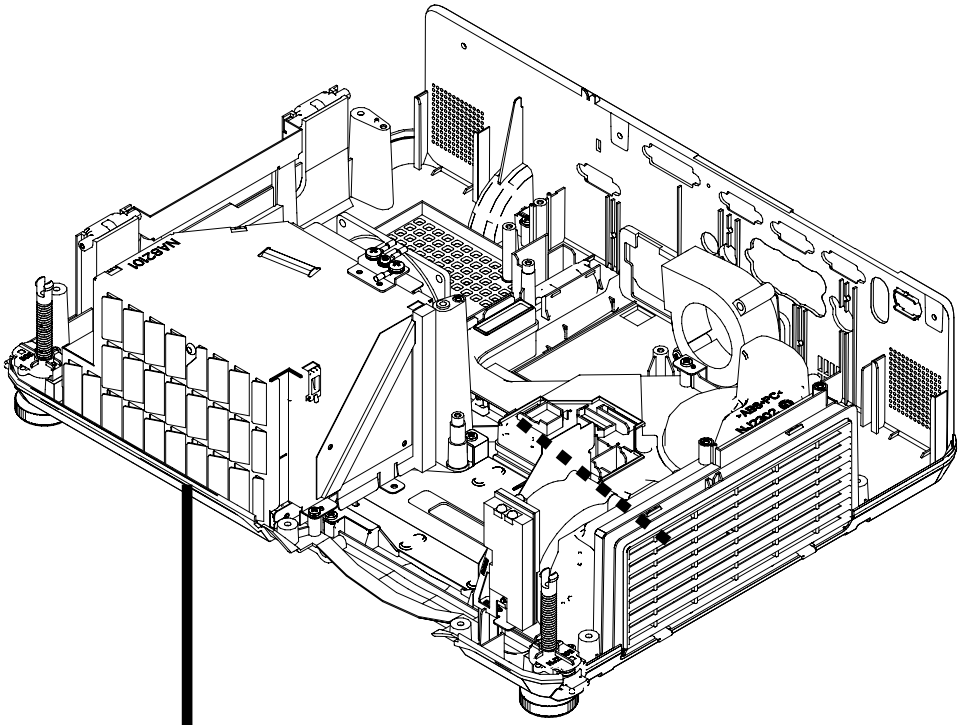
⚠CAUTION

Tighten this screw using a manual screwdriver.

2. Replacing the power units.

Remove the screw to take off the duct.
Remove the 3 screws to take off the power unit.

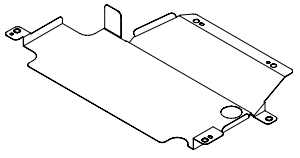
NOTE : One of screws is behind the duct.



⚠CAUTION

The ballast bracket holding the ballast power unit is installed underneath the power supply bracket. Be careful not to injure your fingers or hand by the edges of the ballast bracket during maintenance around the power units.

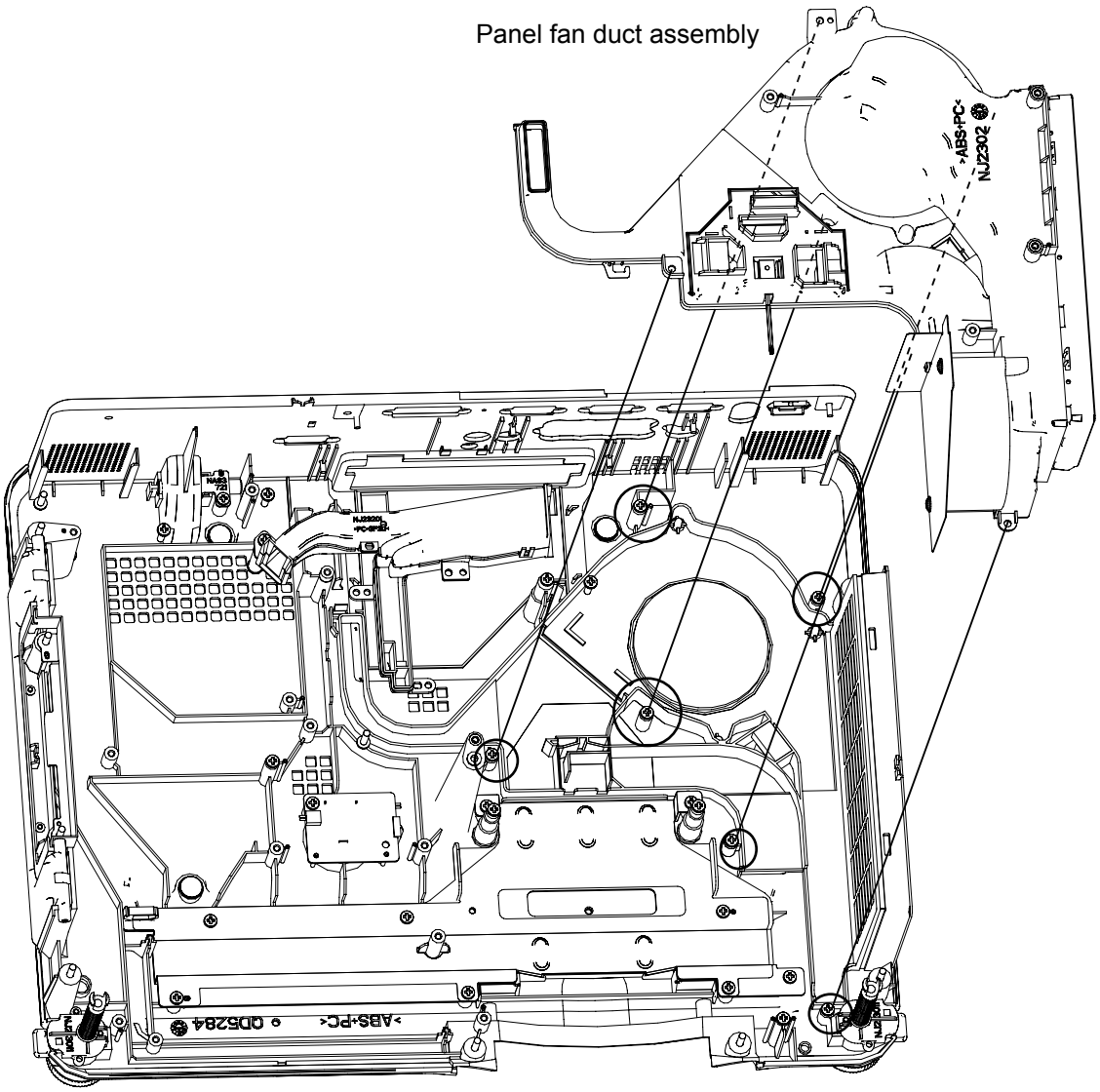
Ballast bracket



3. Detaching and attaching the Panel Fan Duct assembly

When disassembling

Remove 6 screws and unhook the panel fan duct assembly as shown in the diagram.

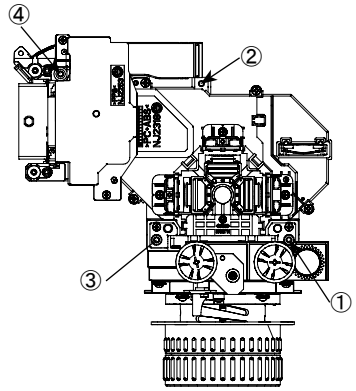


When assembling

Tighten 6 screws and hook the panel fan duct assembly.

4. Attaching the dichroic optics unit

Put the dichroic optics unit on the bottom case, and tighten screws in order of 1, 2, 3 and 4 as shown in the diagram.

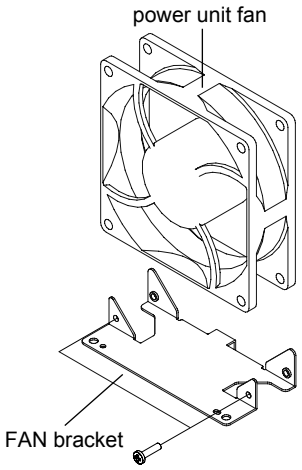


5. Replacing the power unit fan

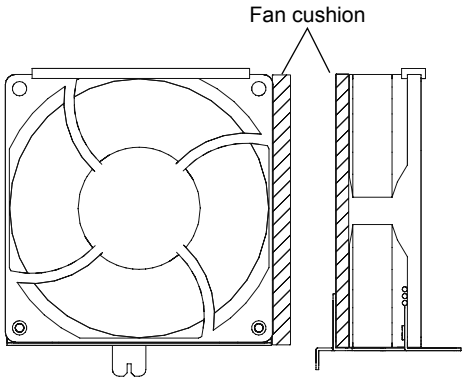
Be sure to do the following works before changing the power unit fan.

a. Assemble the power unit fan and fan cushion as described below.

1) Attach the fan bracket to the new power unit fan using 2 screws.



2) Stick the Fan cushion along the right side of the fan as shown in the diagram.



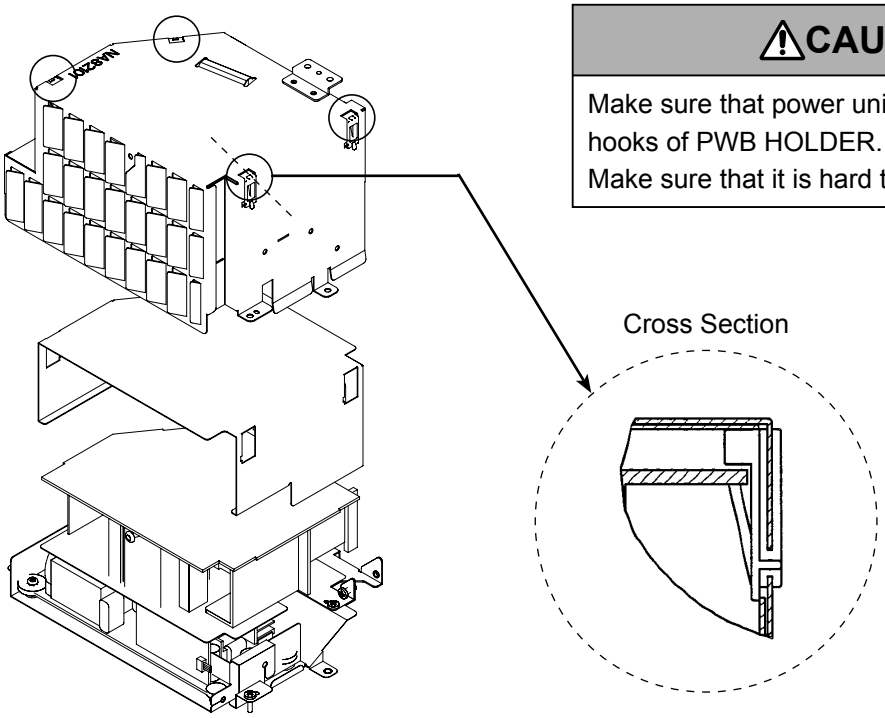
Note:

- If you install the new fan without the fan cushion, the fan vibration in operating might make noise.
- Be careful not to invert the fan when assembling the exhaust fan assembly.

6. Replacing the PWB assembly NETWORK

Attach the bracket to the PWB assembly NETWORK covering the LAN Jack completely.

7. Assembling the power unit

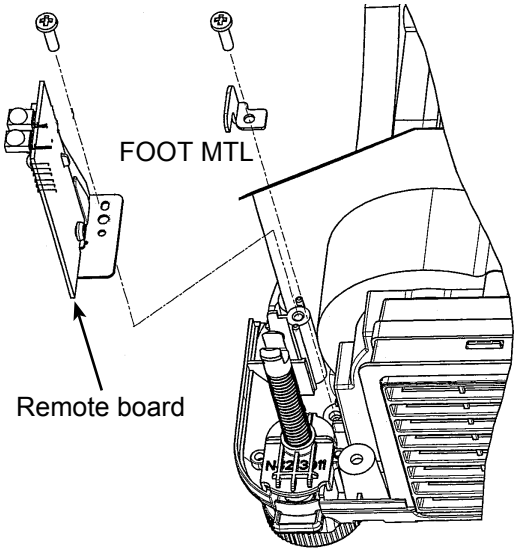


⚠CAUTION

Make sure that power unit board was fixed by 4 hooks of PWB HOLDER.
Make sure that it is hard to remove.

8. Assembling the FOOT MTL

Remove the remote board first when assembling the FOOT MTL.
This is necessary when replacing the FAN and so on.



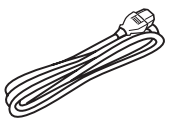
9. Replacement Parts list

PRODUCT SAFETY NOTE : Components marked with a ⚠ have special characteristics important to safety. Before replacing any of there components, read carefully, the PRODUCT SAFETY NOTICE of this Service Manual. Don't degrade the safety of the projector through improper servicing.

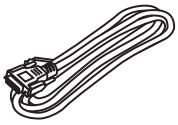
● CP-X505

SYMBOL NO.	PARTS NO.	DESCRIPTION	SYMBOL NO.	PARTS NO.	DESCRIPTION
1	QD52913	UPPER CASE ASS'Y X505	30	JP50854	EDX40 PWB ASS'Y INPUT
2	PC06761	CONT BUTTON ASSY EDX40	31	JP50855	EDX40 PWB ASS'Y CONTROL
3	QD52933	LAMP DOOR ASS'Y EDX40	32	JP50856	EDX40 PWB ASS'Y SW
4	QD53022	L SHIFT COV ASS EDX40	33	JP50857	EDX40 PWB ASS'Y BATTERY
5	KQ04951	EDX STD LENS SGL	34	JP51125	EDX40 PWB ASS'Y NETWORK
6	QD52834	BOTTOM CASE ASS'Y	35	EA02263R	CPC36 CONNECTOR
7	QJ02561	ADJUST FOOT ASSY	36	CK39802R	EL8302IUZ-T7
8	PE00241	BATTERY CAP	37	CK51461R	SN74LVC1G97DCKR
9	PE00281	RUBBER FOOT	⚠ 38	HA01762	EDX POWER UNIT(BALLAST)
10	QD52951	FRONT COVER ASS'Y	⚠ 39	HA01701	EDX POWER UNIT(CIRCUIT)
11	QD52851	FILTER COVER EDX40	⚠ 40	2722449	FUSE 8A
12	PV00471	HANDLE	41	HA01711	EDX FILTER UNIT
13	PM31261	AC PANEL	42	GK01555	SP-40M C-R PH181 ASY
14	ML00863	PLASTIC RIVET(FOR THERMAL SW ASY)	43	GK01552	SP-40M C-L PH301 ASY
15	MU03642	EDX AIR FILTER EFA S	44	GK01553	SP-40M C PH121 ASY
16	MJ02872	D-SUB SCREW	45	GK01554	SP-40M VPH700 ASY
⚠ 17	GS01341	DC FANBM6025	⚠ 46	FH00381	THERMAL SW ASSY EDX
⚠ 18	GS01271	DC FAN BT1002	47	PH39011	LENS CAP
⚠ 19	GS01282	DC FAN 3110KL(*)	48	DT00771	LAMP UNIT ASS'Y
⚠ 20	GS01361	DC FAN 3610KL	49	UX26267	EDX35N LCD/LENS PRISM ASS'Y(SERVICE or REPAIR)
⚠ 21	GS01351	DC FAN BG703	50	ML01521	PLASTIC RIVET FOR HANDLE
22	MU03731	FAN SHADE EDX40	⚠	EV01663	POWER SUPPLY CORD(US TYPE) W/CORE
23	MU03764	P FAN CUSHION EDX40(*)	⚠	EV01673	POWER SUPPLY CORD(EUROPE TYPE) W/CORE
24	AZ00942	THERMISTOR 200	⚠	EV01683	POWER SUPPLY CORD(UK TYPE) W/CORE
25	AZ00256	THERMISTOR 220		QT49373	INSTRUCTION MANUAL
26	UX26251	EDX40 DICHROIC OPTICS UNIT		EW06661	RGB-D CABLE(15PIN MALE TO 15PIN MALE)
27	JP55341	EDX35N PWB ASS'Y MAIN H-S		HL02194	REMOTE CONTROL UNIT R002
28	JP50852	EDX40 PWB ASS'Y KEYBOARD		NX05741	CLEANING TOOL FOR DUST
29	JP50853	EDX40 PWB ASS'Y REMOTE CONT.		NX05742	COTTON STICK L70

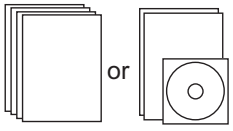
(*) Purchase the P FAN CUSHION EDX40(MU03764) when you replace the DC FAN 3110KL(GS01282).



Power Cord



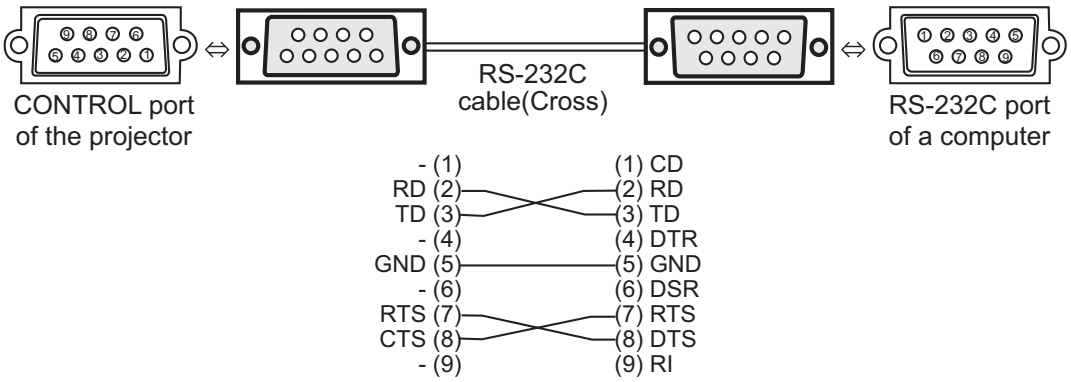
RGB Cable



Instruction manual

Remote Control

10. RS-232C communication



● Connecting the cable

(1) Turn off the projector and the computer power supplies.

(2) Connect the CONTROL port of the projector with a RS-232C port of the computer by a RS-232C cable(Cross). Use the cable that fulfills the specification shown in the previous page.

(3) Turn on the computer power supply and after the computer has started up, turn on the projector power supply.

● Communications setting

19200 bps, 8N1

1. Protocol

Consist of header (7 bytes) + Command data (6 bytes)

2. Header

BE + EF + 03 + 06 + 00 + CRC_low + CRC_high

CRC_low: Lower byte of CRC flag for command data

CRC_high: Upper byte of CRC flag for command data

3. Command Data

Command Data Chart

byte_0	byte_1	byte_2	byte_3	byte_4	byte_5
Action		Type		Setting code	
low	high	low	high	low	high

Action (byte_0 - 1)

Action	Classification	Content
1	Set	Change setting to desired value.
2	Get	Read projector internal setup value.
4	Increment	Increment setup value by 1.
5	Decrement	Decrement setup value by 1.
6	Execute	Run a command.

Requesting projector status (Get command)

(1) Send the request code Header + Command data (‘02H’+‘00H’+ type (2 bytes)+ ‘00H’+‘00H’) from the computer to the projector.
(2) The projector returns the response code ‘1DH’+ data (2 bytes) to the computer.

Changing the projector settings (Set command)

(1) Send the setting code Header + Command data (‘01H’+‘00H’+ type (2 bytes) + setting code (2 bytes)) from the computer to the projector.
(2) The projector changes the setting based on the above setting code.
(3) The projector returns the response code ‘06H’ to the computer.

Using the projector default settings (Reset Command)

(1) The computer sends the default setting code Header + Command data (‘06H’+ ‘00H’+ type (2 bytes) + ‘00H’+‘00H’) to the projector.
(2) The projector changes the specified setting to the default value.
(3) The projector returns the response code ‘06H’ to the computer.

Increasing the projector setting value (Increment command)

(1) The computer sends the increment code Header + Command data (‘04H’+ ‘00H’+ type (2 bytes) +‘00H’+ ‘00H’) to the projector.
(2) The projector in creases the setting value on the above setting code.
(3) The projector returns the response code ‘06H’ to the computer.

Decreasing the projector setting value (Decrement command)

(1) The computer sends the decrement code Header + Command data (‘05H’+ ‘00H’+ type (2 bytes) +‘00H’ + ‘00H’) to the projector.
(2) The projector decreases the setting value on the above setting code.
(3) The projector returns the response code ‘06H’ to the computer.

When the projector cannot understand the received command

When the projector cannot understand the received command, the error code ‘15H’ is sent back to the computer.

Sometimes the projector cannot properly receive the command. In such a case, the command is not executed and the error code ‘15H’ is sent back to the computer. If this error code is returned, send the same command again.

When the projector cannot execute the received command.

When the projector cannot execute the received command, the error code ‘1cH’ + ‘xxxxH’ is sent back to the computer. When the data length is greater than indicated by the data length code, the projector ignore the excess data code.

Conversely when the data length is shorter than indicated by the data length code, an error code will be returned to the computer.

NOTE • Operation cannot be guaranteed when the projector receives an undefined command or data.
• Provide an interval of at least 40ms between the response code and any other code.
• The projector outputs test data when the power supply is switched ON, and when the lamp is lit. Ignore this data.
• Commands are not accepted during warm-up.

● Command data chart

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
Power	Set	Turn off	BE EF	03	06 00	2A D3	01 00	00 60	00 00
		Turn on	BE EF	03	06 00	BA D2	01 00	00 60	01 00
	Get		BE EF	03	06 00	19 D3	02 00	00 60	00 00
			[Example return] 00 00 [Off] 01 00 [On] 02 00 [Cool down]						
Input Source	Set	RGB1	BE EF	03	06 00	FE D2	01 00	00 20	00 00
		RGB2	BE EF	03	06 00	3E D0	01 00	00 20	04 00
		M1-D	BE EF	03	06 00	0E D2	01 00	00 20	03 00
		VIDEO	BE EF	03	06 00	6E D3	01 00	00 20	01 00
		S-VIDEO	BE EF	03	06 00	9E D3	01 00	00 20	02 00
		COMPONENT	BE EF	03	06 00	AE D1	01 00	00 20	05 00
	Get		BE EF	03	06 00	CD D2	02 00	00 20	00 00
Error Status	Get		BE EF	03	06 00	D9 D8	02 00	20 60	00 00
			[Example return] 00 00 [Normal] 01 00 [Cover error] 02 00 [Fan error] 03 00 [Lamp error] 04 00 [Temp error] 05 00 [Air flow error] 06 00 [Lamp time error] 07 00 [Cool error] 08 00 [Filter error]						
BRIGHTNESS	Get		BE EF	03	06 00	89 D2	02 00	03 20	00 00
	Increment		BE EF	03	06 00	EF D2	04 00	03 20	00 00
	Decrement		BE EF	03	06 00	3E D3	05 00	03 20	00 00
BRIGHTNESS Reset	Execute		BE EF	03	06 00	58 D3	06 00	00 70	00 00
CONTRAST	Get		BE EF	03	06 00	FD D3	02 00	04 20	00 00
	Increment		BE EF	03	06 00	9B D3	04 00	04 20	00 00
	Decrement		BE EF	03	06 00	4A D2	05 00	04 20	00 00
CONTRAST Reset	Execute		BE EF	03	06 00	A4 D2	06 00	01 70	00 00
PICTURE MODE	Set	NORMAL	BE EF	03	06 00	23 F6	01 00	BA 30	00 00
		CINEMA	BE EF	03	06 00	B3 F7	01 00	BA 30	01 00
		DYNAMIC	BE EF	03	06 00	E3 F4	01 00	BA 30	04 00
		BOARD(BLACK)	BE EF	03	06 00	E3 EF	01 00	BA 30	20 00
		Daylight Mode	BE EF	03	06 00	23 E2	01 00	BA 30	30 00
		WHITEBOARD	BE EF	03	06 00	83 EE	01 00	BA 30	22 00
	Get		BE EF	03	06 00	10 F6	02 00	BA 30	00 00
			[Example return] 00 00 [Normal] 01 00 [Cinema] 04 00 [Dynamic] 10 00 [Custom] 20 00 [BOARD(BLACK)] 30 00 [Daylight Mode] 22 00 [WHITEBOARD]						
GAMMA	Set	#1 DEFAULT	BE EF	03	06 00	07 E9	01 00	A1 30	20 00
		#1 CUSTOM	BE EF	03	06 00	07 FD	01 00	A1 30	10 00
		#2 DEFAULT	BE EF	03	06 00	97 E8	01 00	A1 30	21 00
		#2 CUSTOM	BE EF	03	06 00	97 FC	01 00	A1 30	11 00
		#3 DEFAULT	BE EF	03	06 00	67 E8	01 00	A1 30	22 00
		#3 CUSTOM	BE EF	03	06 00	67 FC	01 00	A1 30	12 00
		#4 DEFAULT	BE EF	03	06 00	F7 E9	01 00	A1 30	23 00
		#4 CUSTOM	BE EF	03	06 00	F7 FD	01 00	A1 30	13 00
		#5 DEFAULT	BE EF	03	06 00	C7 EB	01 00	A1 30	24 00
		#5 CUSTOM	BE EF	03	06 00	C7 FF	01 00	A1 30	14 00
	Get		BE EF	03	06 00	F4 F0	02 00	A1 30	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
User Gamma Pattern	Set	Off	BE EF	03	06 00	FB FA	01 00	80 30	00 00
		9 step gray scale	BE EF	03	06 00	6B FB	01 00	80 30	01 00
		15 steps gray scale	BE EF	03	06 00	9B FB	01 00	80 30	02 00
		Ramp	BE EF	03	06 00	0B FA	01 00	80 30	03 00
	Get		BE EF	03	06 00	C8 FA	02 00	80 30	00 00
User Gamma Point 1	Get		BE EF	03	06 00	08 FE	02 00	90 30	00 00
	Increment		BE EF	03	06 00	6E FE	04 00	90 30	00 00
	Decrement		BE EF	03	06 00	BF FF	05 00	90 30	00 00
User Gamma Point 2	Get		BE EF	03	06 00	F4 FF	02 00	91 30	00 00
	Increment		BE EF	03	06 00	92 FF	04 00	91 30	00 00
	Decrement		BE EF	03	06 00	43 FE	05 00	91 30	00 00
User Gamma Point 3	Get		BE EF	03	06 00	B0 FF	02 00	92 30	00 00
	Increment		BE EF	03	06 00	D6 FF	04 00	92 30	00 00
	Decrement		BE EF	03	06 00	07 FE	05 00	92 30	00 00
User Gamma Point 4	Get		BE EF	03	06 00	4C FE	02 00	93 30	00 00
	Increment		BE EF	03	06 00	2A FE	04 00	93 30	00 00
	Decrement		BE EF	03	06 00	FB FF	05 00	93 30	00 00
User Gamma Point 5	Get		BE EF	03	06 00	38 FF	02 00	94 30	00 00
	Increment		BE EF	03	06 00	5E FF	04 00	94 30	00 00
	Decrement		BE EF	03	06 00	8F FE	05 00	94 30	00 00
User Gamma Point 6	Get		BE EF	03	06 00	C4 FE	02 00	95 30	00 00
	Increment		BE EF	03	06 00	A2 FE	04 00	95 30	00 00
	Decrement		BE EF	03	06 00	73 FF	05 00	95 30	00 00
User Gamma Point 7	Get		BE EF	03	06 00	80 FE	02 00	96 30	00 00
	Increment		BE EF	03	06 00	E6 FE	04 00	96 30	00 00
	Decrement		BE EF	03	06 00	37 FF	05 00	96 30	00 00
User Gamma Point 8	Get		BE EF	03	06 00	7C FF	02 00	97 30	00 00
	Increment		BE EF	03	06 00	1A FF	04 00	97 30	00 00
	Decrement		BE EF	03	06 00	CB FE	05 00	97 30	00 00
COLOR TEMP	Set	LOW	BE EF	03	06 00	6B F4	01 00	B0 30	01 00
		MID	BE EF	03	06 00	9B F4	01 00	B0 30	02 00
		HIGH	BE EF	03	06 00	0B F5	01 00	B0 30	03 00
		Hi-BRIGHT-1	BE EF	03	06 00	3B F2	01 00	B0 30	08 00
		Hi-BRIGHT-2	BE EF	03	06 00	AB F3	01 00	B0 30	09 00
		CUSTOM-LOW	BE EF	03	06 00	AB F9	01 00	B0 30	11 00
		CUSTOM-MID	BE EF	03	06 00	5B F9	01 00	B0 30	12 00
		CUSTOM-HIGH	BE EF	03	06 00	CB F8	01 00	B0 30	13 00
		CUSTOM-Hi-BRIGHT-1	BE EF	03	06 00	FB FF	01 00	B0 30	18 00
		CUSTOM-Hi-BRIGHT-2	BE EF	03	06 00	6B FE	01 00	B0 30	19 00
	Get		BE EF	03	06 00	C8 F5	02 00	B0 30	00 00
COLOR TEMP GAIN R	Get		BE EF	03	06 00	34 F4	02 00	B1 30	00 00
	Increment		BE EF	03	06 00	52 F4	04 00	B1 30	00 00
	Decrement		BE EF	03	06 00	83 F5	05 00	B1 30	00 00
COLOR TEMP GAIN G	Get		BE EF	03	06 00	70 F4	02 00	B2 30	00 00
	Increment		BE EF	03	06 00	16 F4	04 00	B2 30	00 00
	Decrement		BE EF	03	06 00	C7 F5	05 00	B2 30	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
COLOR TEMP GAIN B	Get		BE EF	03	06 00	8C F5	02 00	B3 30	00 00
	Increment		BE EF	03	06 00	EA F5	04 00	B3 30	00 00
	Decrement		BE EF	03	06 00	3B F4	05 00	B3 30	00 00
COLOR TEMP OFFSET R	Get		BE EF	03	06 00	04 F5	02 00	B5 30	00 00
	Increment		BE EF	03	06 00	62 F5	04 00	B5 30	00 00
	Decrement		BE EF	03	06 00	B3 F4	05 00	B5 30	00 00
COLOR TEMP OFFSET G	Get		BE EF	03	06 00	40 F5	02 00	B6 30	00 00
	Increment		BE EF	03	06 00	26 F5	04 00	B6 30	00 00
	Decrement		BE EF	03	06 00	F7 F4	05 00	B6 30	00 00
COLOR TEMP OFFSET B	Get		BE EF	03	06 00	BC F4	02 00	B7 30	00 00
	Increment		BE EF	03	06 00	DA F4	04 00	B7 30	00 00
	Decrement		BE EF	03	06 00	0B F5	05 00	B7 30	00 00
COLOR	Get		BE EF	03	06 00	B5 72	02 00	02 22	00 00
	Increment		BE EF	03	06 00	D3 72	04 00	02 22	00 00
	Decrement		BE EF	03	06 00	02 73	05 00	02 22	00 00
COLOR Reset	Execute		BE EF	03	06 00	80 D0	06 00	0A 70	00 00
TINT	Get		BE EF	03	06 00	49 73	02 00	03 22	00 00
	Increment		BE EF	03	06 00	2F 73	04 00	03 22	00 00
	Decrement		BE EF	03	06 00	FE 72	05 00	03 22	00 00
TINT Reset	Execute		BE EF	03	06 00	7C D1	06 00	0B 70	00 00
SHARPNESS	Get		BE EF	03	06 00	F1 72	02 00	01 22	00 00
	Increment		BE EF	03	06 00	97 72	04 00	01 22	00 00
	Decrement		BE EF	03	06 00	46 73	05 00	01 22	00 00
SHARPNESS Reset	Execute		BE EF	03	06 00	C4 D0	06 00	09 70	00 00
MY MEMORY Load	Set	1	BE EF	03	06 00	0E D7	01 00	14 20	00 00
		2	BE EF	03	06 00	9E D6	01 00	14 20	01 00
		3	BE EF	03	06 00	6E D6	01 00	14 20	02 00
		4	BE EF	03	06 00	FE D7	01 00	14 20	03 00
MY MEMORY Save	Set	1	BE EF	03	06 00	F2 D6	01 00	15 20	00 00
		2	BE EF	03	06 00	62 D7	01 00	15 20	01 00
		3	BE EF	03	06 00	92 D7	01 00	15 20	02 00
		4	BE EF	03	06 00	02 D6	01 00	15 20	03 00
PROGRESSIVE	Set	TURN OFF	BE EF	03	06 00	4A 72	01 00	07 22	00 00
		TV	BE EF	03	06 00	DA 73	01 00	07 22	01 00
		FILM	BE EF	03	06 00	2A 73	01 00	07 22	02 00
	Get		BE EF	03	06 00	79 72	02 00	07 22	00 00
3D-YCS	Set	TURN OFF	BE EF	03	06 00	E6 70	01 00	0A 22	00 00
		MOVIE	BE EF	03	06 00	76 71	01 00	0A 22	01 00
		STILL	BE EF	03	06 00	86 71	01 00	0A 22	02 00
	Get		BE EF	03	06 00	D5 70	02 00	0A 22	00 00
VIDEO NR	Set	LOW	BE EF	03	06 00	26 72	01 00	06 22	01 00
		MID	BE EF	03	06 00	D6 72	01 00	06 22	02 00
		HIGH	BE EF	03	06 00	46 73	01 00	06 22	03 00
	Get		BE EF	03	06 00	85 73	02 00	06 22	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
ASPECT	Set	4:3	BE EF	03	06 00	9E D0	01 00	08 20	00 00
		16:9	BE EF	03	06 00	0E D1	01 00	08 20	01 00
		14:9	BE EF	03	06 00	CE D6	01 00	08 20	09 00
		SMALL	BE EF	03	06 00	FE D1	01 00	08 20	02 00
		NORMAL	BE EF	03	06 00	5E DD	01 00	08 20	10 00
	Get		BE EF	03	06 00	AD D0	02 00	08 20	00 00
OVER SCAN	Get		BE EF	03	06 00	91 70	02 00	09 22	00 00
	Increment		BE EF	03	06 00	F7 70	04 00	09 22	00 00
	Decrement		BE EF	03	06 00	26 71	05 00	09 22	00 00
OVER SCAN Reset	Execute		BE EF	03	06 00	EC D9	06 00	27 70	00 00
V POSITION	Get		BE EF	03	06 00	0D 83	02 00	00 21	00 00
	Increment		BE EF	03	06 00	6B 83	04 00	00 21	00 00
	Decrement		BE EF	03	06 00	BA 82	05 00	00 21	00 00
V POSITION Reset	Execute		BE EF	03	06 00	E0 D2	06 00	02 70	00 00
H POSITION	Get		BE EF	03	06 00	F1 82	02 00	01 21	00 00
	Increment		BE EF	03	06 00	97 82	04 00	01 21	00 00
	Decrement		BE EF	03	06 00	46 83	05 00	01 21	00 00
H POSITION Reset	Execute		BE EF	03	06 00	1C D3	06 00	03 70	00 00
H PHASE	Get		BE EF	03	06 00	49 83	02 00	03 21	00 00
	Increment		BE EF	03	06 00	2F 83	04 00	03 21	00 00
	Decrement		BE EF	03	06 00	FE 82	05 00	03 21	00 00
H SIZE	Get		BE EF	03	06 00	B5 82	02 00	02 21	00 00
	Increment		BE EF	03	06 00	D3 82	04 00	02 21	00 00
	Decrement		BE EF	03	06 00	02 83	05 00	02 21	00 00
H SIZE Reset	Execute		BE EF	03	06 00	68 D2	06 00	04 70	00 00
AUTO ADJUST	Execute		BE EF	03	06 00	91 D0	06 00	0A 20	00 00
COLOR SPACE	Set	AUTO	BE EF	03	06 00	0E 72	01 00	04 22	00 00
		RGB	BE EF	03	06 00	9E 73	01 00	04 22	01 00
		SMPTE240	BE EF	03	06 00	6E 73	01 00	04 22	02 00
		REC709	BE EF	03	06 00	FE 72	01 00	04 22	03 00
		REC601	BE EF	03	06 00	CE 70	01 00	04 22	04 00
	Get		BE EF	03	06 00	3D 72	02 00	04 22	00 00
COMPONENT	Set	COMPONENT	BE EF	03	06 00	4A D7	01 00	17 20	00 00
		SCART RGB	BE EF	03	06 00	DA D6	01 00	17 20	01 00
	Get		BE EF	03	06 00	79 D7	02 00	17 20	00 00
C-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	A2 70	01 00	11 22	0A 00
		NTSC	BE EF	03	06 00	C2 74	01 00	11 22	04 00
		PAL	BE EF	03	06 00	52 75	01 00	11 22	05 00
		SECAM	BE EF	03	06 00	52 70	01 00	11 22	09 00
		NTSC4.43	BE EF	03	06 00	62 77	01 00	11 22	02 00
		M-PAL	BE EF	03	06 00	C2 71	01 00	11 22	08 00
		N-PAL	BE EF	03	06 00	32 74	01 00	11 22	07 00
	Get		BE EF	03	06 00	31 76	02 00	11 22	00 00
S-VIDEO FORMAT	Set	AUTO	BE EF	03	06 00	E6 70	01 00	12 22	0A 00
		NTSC	BE EF	03	06 00	86 74	01 00	12 22	04 00
		PAL	BE EF	03	06 00	16 75	01 00	12 22	05 00
		SECAM	BE EF	03	06 00	16 70	01 00	12 22	09 00
		NTSC4.43	BE EF	03	06 00	26 77	01 00	12 22	02 00
		M-PAL	BE EF	03	06 00	86 71	01 00	12 22	08 00
		N-PAL	BE EF	03	06 00	76 74	01 00	12 22	07 00
	Get		BE EF	03	06 00	75 76	02 00	12 22	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
M1-D	Set	NORMAL	BE EF	03	06 00	3E D9	01 00	20 20	00 00
		ENHANCED	BE EF	03	06 00	AE D8	01 00	20 20	01 00
	Get		BE EF	03	06 00	0D D9	02 00	20 20	00 00
RGB 1	Set	SYNC ON G OFF	BE EF	03	06 00	5E D7	01 00	10 20	02 00
		SYNC ON G ON	BE EF	03	06 00	CE D6	01 00	10 20	03 00
	Get		BE EF	03	06 00	0D D6	02 00	10 20	00 00
RGB 2	Set	SYNC ON G OFF	BE EF	03	06 00	A2 D6	01 00	11 20	02 00
		SYNC ON G ON	BE EF	03	06 00	32 D7	01 00	11 20	03 00
	Get		BE EF	03	06 00	F1 D7	02 00	11 20	00 00
FRAME LOCK	Set	TURN OFF	BE EF	03	06 00	CB D6	01 00	14 30	00 00
		TURN ON	BE EF	03	06 00	5B D7	01 00	14 30	01 00
	Get		BE EF	03	06 00	F8 D6	02 00	14 30	00 00
KEYSTONE V	Get		BE EF	03	06 00	B9 D3	02 00	07 20	00 00
	Increment		BE EF	03	06 00	DF D3	04 00	07 20	00 00
	Decrement		BE EF	03	06 00	0E D2	05 00	07 20	00 00
KEYSTONE V Reset	Execute		BE EF	03	06 00	08 D0	06 00	0C 70	00 00
KEYSTONE H	Get		BE EF	03	06 00	E9 D0	02 00	0B 20	00 00
	Increment		BE EF	03	06 00	8F D0	04 00	0B 20	00 00
	Decrement		BE EF	03	06 00	5E D1	05 00	0B 20	00 00
KEYSTONE H Reset	Execute		BE EF	03	06 00	98 D8	06 00	20 70	00 00
ACTIVE IRIS	Set	TURN OFF	BE EF	03	06 00	0B 22	01 00	04 33	00 00
		AUTO1	BE EF	03	06 00	9B 23	01 00	04 33	01 00
		AUTO2	BE EF	03	06 00	6B 23	01 00	04 33	02 00
		THEATER	BE EF	03	06 00	CB SF	01 00	04 33	10 00
		PRESENTATION	BE EF	03	06 00	5B 2E	01 00	04 33	11 00
	Get		BE EF	03	06 00	38 22	02 00	04 33	00 00
WHISPER	Set	NORMAL	BE EF	03	06 00	3B 23	01 00	00 33	00 00
		WHISPER	BE EF	03	06 00	AB 22	01 00	00 33	01 00
	Get		BE EF	03	06 00	08 23	02 00	00 33	00 00
MIRROR	Set	NORMAL	BE EF	03	06 00	C7 D2	01 00	01 30	00 00
		H:INVERT	BE EF	03	06 00	57 D3	01 00	01 30	01 00
		V:INVERT	BE EF	03	06 00	A7 D3	01 00	01 30	02 00
		H&V:INVERT	BE EF	03	06 00	37 D2	01 00	01 30	03 00
	Get		BE EF	03	06 00	F4 D2	02 00	01 30	00 00
VOLUME-RGB1	Get		BE EF	03	06 00	CD CC	02 00	60 20	00 00
	Increment		BE EF	03	06 00	AB CC	04 00	60 20	00 00
	Decrement		BE EF	03	06 00	7A CD	05 00	60 20	00 00
VOLUME-RGB2	Get		BE EF	03	06 00	FD CD	02 00	64 20	00 00
	Increment		BE EF	03	06 00	9B CD	04 00	64 20	00 00
	Decrement		BE EF	03	06 00	4A CC	05 00	64 20	00 00
VOLUME-M1-D	Get		BE EF	03	06 00	89 CC	02 00	63 20	00 00
	Increment		BE EF	03	06 00	EF CC	04 00	63 20	00 00
	Decrement		BE EF	03	06 00	3E CD	05 00	63 20	00 00
VOLUME-Video	Get		BE EF	03	06 00	31 CD	02 00	61 20	00 00
	Increment		BE EF	03	06 00	57 CD	04 00	61 20	00 00
	Decrement		BE EF	03	06 00	86 CC	05 00	61 20	00 00
VOLUME-S-Video	Get		BE EF	03	06 00	75 CD	02 00	62 20	00 00
	Increment		BE EF	03	06 00	13 CD	04 00	62 20	00 00
	Decrement		BE EF	03	06 00	C2 CC	05 00	62 20	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
VOLUME-Component	Get		BE EF	03	06 00	01 CC	02 00	65 20	00 00
	Increment		BE EF	03	06 00	67 CC	04 00	65 20	00 00
	Decrement		BE EF	03	06 00	B6 CD	05 00	65 20	00 00
TREBLE-RGB1	Get		BE EF	03	06 00	0D C8	02 00	70 20	00 00
	Increment		BE EF	03	06 00	6B C8	04 00	70 20	00 00
	Decrement		BE EF	03	06 00	BA C9	05 00	70 20	00 00
TREBLE-RGB2	Get		BE EF	03	06 00	3D C9	02 00	74 20	00 00
	Increment		BE EF	03	06 00	5B C9	04 00	74 20	00 00
	Decrement		BE EF	03	06 00	8A C8	05 00	74 20	00 00
TREBLE-M1-D	Get		BE EF	03	06 00	49 C8	02 00	73 20	00 00
	Increment		BE EF	03	06 00	2F C8	04 00	73 20	00 00
	Decrement		BE EF	03	06 00	FE C9	05 00	73 20	00 00
TREBLE-Video	Get		BE EF	03	06 00	F1 C9	02 00	71 20	00 00
	Increment		BE EF	03	06 00	97 C9	04 00	71 20	00 00
	Decrement		BE EF	03	06 00	46 C8	05 00	71 20	00 00
TREBLE-S-Video	Get		BE EF	03	06 00	B5 C9	02 00	72 20	00 00
	Increment		BE EF	03	06 00	D3 C9	04 00	72 20	00 00
	Decrement		BE EF	03	06 00	02 C8	05 00	72 20	00 00
TREBLE-Component	Get		BE EF	03	06 00	C1 C8	02 00	75 20	00 00
	Increment		BE EF	03	06 00	A7 C8	04 00	75 20	00 00
	Decrement		BE EF	03	06 00	76 C9	05 00	75 20	00 00
BASS-RGB1	Get		BE EF	03	06 00	0D FB	02 00	80 20	00 00
	Increment		BE EF	03	06 00	6B FB	04 00	80 20	00 00
	Decrement		BE EF	03	06 00	BA FA	05 00	80 20	00 00
BASS-RGB2	Get		BE EF	03	06 00	3D FA	02 00	84 20	00 00
	Increment		BE EF	03	06 00	5B FA	04 00	84 20	00 00
	Decrement		BE EF	03	06 00	8A FB	05 00	84 20	00 00
BASS-M1-D	Get		BE EF	03	06 00	49 FB	02 00	83 20	00 00
	Increment		BE EF	03	06 00	2F FB	04 00	83 20	00 00
	Decrement		BE EF	03	06 00	FE FA	05 00	83 20	00 00
BASS-Video	Get		BE EF	03	06 00	F1 FA	02 00	81 20	00 00
	Increment		BE EF	03	06 00	97 FA	04 00	81 20	00 00
	Decrement		BE EF	03	06 00	46 FB	05 00	81 20	00 00
BASS-S-Video	Get		BE EF	03	06 00	B5 FA	02 00	82 20	00 00
	Increment		BE EF	03	06 00	D3 FA	04 00	82 20	00 00
	Decrement		BE EF	03	06 00	02 FB	05 00	82 20	00 00
BASS-Component	Get		BE EF	03	06 00	C1 FB	02 00	85 20	00 00
	Increment		BE EF	03	06 00	A7 FB	04 00	85 20	00 00
	Decrement		BE EF	03	06 00	76 FA	05 00	85 20	00 00
SRS WOW /SURROND-RGB1	Set	TURN OFF	BE EF	03	06 00	FE FF	01 00	90 20	00 00
		LOW	BE EF	03	06 00	6E FE	01 00	90 20	01 00
		MID	BE EF	03	06 00	9E FE	01 00	90 20	02 00
		HIGH	BE EF	03	06 00	0E FF	01 00	90 20	03 00
	Get		BE EF	03	06 00	CD FF	02 00	90 20	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
SRS WOW /SURROND-RGB2	Set	TURN OFF	BE EF	03	06 00	CE FE	01 00	94 20	00 00
		LOW	BE EF	03	06 00	5E FF	01 00	94 20	01 00
		MID	BE EF	03	06 00	AE FF	01 00	94 20	02 00
		HIGH	BE EF	03	06 00	3E FF	01 00	94 20	03 00
	Get		BE EF	03	06 00	FD FE	02 00	94 20	00 00
SRS WOW /SURROND-M1-D	Set	TURN OFF	BE EF	03	06 00	BA FF	01 00	93 20	00 00
		LOW	BE EF	03	06 00	2A FE	01 00	93 20	01 00
		MID	BE EF	03	06 00	DA FE	01 00	93 20	02 00
		HIGH	BE EF	03	06 00	4A FF	01 00	93 20	03 00
	Get		BE EF	03	06 00	89 FF	02 00	93 20	00 00
SRS WOW /SURROND-Video	Set	TURN OFF	BE EF	03	06 00	02 FE	01 00	91 20	00 00
		LOW	BE EF	03	06 00	92 FF	01 00	91 20	01 00
		MID	BE EF	03	06 00	62 FF	01 00	91 20	02 00
		HIGH	BE EF	03	06 00	F2 FE	01 00	91 20	03 00
	Get		BE EF	03	06 00	31 FE	02 00	91 20	00 00
SRS WOW /SURROND-S-Video	Set	TURN OFF	BE EF	03	06 00	46 FE	01 00	92 20	00 00
		LOW	BE EF	03	06 00	D6 FF	01 00	92 20	01 00
		MID	BE EF	03	06 00	26 FF	01 00	92 20	02 00
		HIGH	BE EF	03	06 00	B6 FE	01 00	92 20	03 00
	Get		BE EF	03	06 00	75 FE	02 00	92 20	00 00
SRS WOW /SURROND-Component	Set	TURN OFF	BE EF	03	06 00	32 FF	01 00	95 20	00 00
		LOW	BE EF	03	06 00	A2 FE	01 00	95 20	01 00
		MID	BE EF	03	06 00	52 FE	01 00	95 20	02 00
		HIGH	BE EF	03	06 00	C2 FF	01 00	95 20	03 00
	Get		BE EF	03	06 00	01 FF	02 00	95 20	00 00
MUTE	Set	TURN OFF	BE EF	03	06 00	46 D3	01 00	02 20	00 00
		TURN ON	BE EF	03	06 00	D6 D2	01 00	02 20	01 00
	Get		BE EF	03	06 00	75 D3	02 00	02 20	00 00
SPEAKER	Set	TURN OFF	BE EF	03	06 00	6E D5	01 00	1C 20	00 00
		TURN ON	BE EF	03	06 00	FE D4	01 00	1C 20	01 00
	Get		BE EF	03	06 00	5D D5	02 00	1C 20	00 00
AUDIO - RGB1	Set	TURN OFF	BE EF	03	06 00	FE DD	01 00	30 20	00 00
		Audio1	BE EF	03	06 00	6E DC	01 00	30 20	01 00
		Audio2	BE EF	03	06 00	9E DC	01 00	30 20	02 00
		Audio3	BE EF	03	06 00	0E DD	01 00	30 20	03 00
		Audio4	BE EF	03	06 00	3E DF	01 00	30 20	04 00
	Get		BE EF	03	06 00	CD DD	02 00	30 20	00 00
AUDIO - RGB2	Set	TURN OFF	BE EF	03	06 00	CE DC	01 00	34 20	00 00
		Audio1	BE EF	03	06 00	5E DD	01 00	34 20	01 00
		Audio2	BE EF	03	06 00	AE DD	01 00	34 20	02 00
		Audio3	BE EF	03	06 00	3E DC	01 00	34 20	03 00
		Audio4	BE EF	03	06 00	0E DE	01 00	34 20	04 00
	Get		BE EF	03	06 00	FD DC	02 00	34 20	00 00

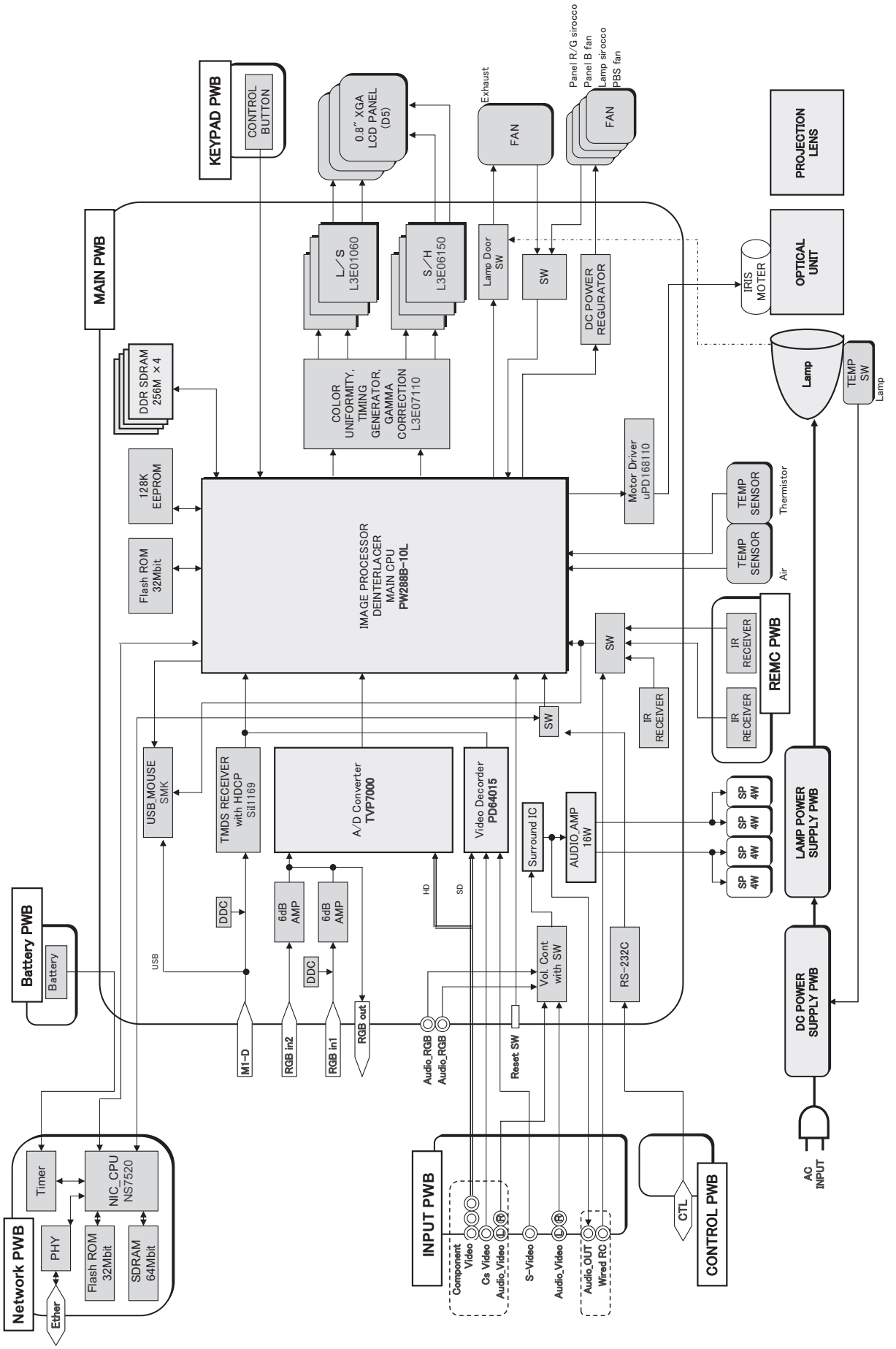
Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
AUDIO - M1-D	Set	TURN OFF	BE EF	03	06 00	BA DD	01 00	33 20	00 00
		Audio1	BE EF	03	06 00	2A DC	01 00	33 20	01 00
		Audio2	BE EF	03	06 00	DA DC	01 00	33 20	02 00
		Audio3	BE EF	03	06 00	4A DD	01 00	33 20	03 00
		Audio4	BE EF	03	06 00	7A DF	01 00	33 20	04 00
	Get		BE EF	03	06 00	89 DD	02 00	33 20	00 00
AUDIO - Video	Set	TURN OFF	BE EF	03	06 00	02 DC	01 00	31 20	00 00
		Audio1	BE EF	03	06 00	92 DD	01 00	31 20	01 00
		Audio2	BE EF	03	06 00	62 DD	01 00	31 20	02 00
		Audio3	BE EF	03	06 00	F2 DC	01 00	31 20	03 00
		Audio4	BE EF	03	06 00	C2 DE	01 00	31 20	04 00
	Get		BE EF	03	06 00	31 DC	02 00	31 20	00 00
AUDIO - S-Video	Set	TURN OFF	BE EF	03	06 00	46 DC	01 00	32 20	00 00
		Audio1	BE EF	03	06 00	D6 DD	01 00	32 20	01 00
		Audio2	BE EF	03	06 00	26 DD	01 00	32 20	02 00
		Audio3	BE EF	03	06 00	B6 DC	01 00	32 20	03 00
		Audio4	BE EF	03	06 00	86 DE	01 00	32 20	04 00
	Get		BE EF	03	06 00	75 DC	02 00	32 20	00 00
AUDIO - Component	Set	TURN OFF	BE EF	03	06 00	32 DD	01 00	35 20	00 00
		Audio1	BE EF	03	06 00	A2 DC	01 00	35 20	01 00
		Audio2	BE EF	03	06 00	52 DC	01 00	35 20	02 00
		Audio3	BE EF	03	06 00	C2 DD	01 00	35 20	03 00
		Audio4	BE EF	03	06 00	F2 DF	01 00	35 20	04 00
	Get		BE EF	03	06 00	01 DD	02 00	35 20	00 00
IR REMOTE Front	Set	Off	BE EF	03	06 00	FF 32	01 00	00 26	00 00
		On	BE EF	03	06 00	6F 33	01 00	00 26	01 00
	Get		BE EF	03	06 00	CC 32	02 00	00 26	00 00
IR REMOTE Rear	Set	Off	BE EF	03	06 00	03 33	01 00	01 26	00 00
		On	BE EF	03	06 00	93 32	01 00	01 26	01 00
	Get		BE EF	03	06 00	30 33	02 00	01 26	00 00
IR REMOTE Top	Set	Off	BE EF	03	06 00	47 33	01 00	02 26	00 00
		On	BE EF	03	06 00	D7 32	01 00	02 26	01 00
	Get		BE EF	03	06 00	74 33	02 00	02 26	00 00
IR REMOTE FREQ. NORMAL	Set	Off	BE EF	03	06 00	FF 3D	01 00	30 26	00 00
		On	BE EF	03	06 00	6F 3C	01 00	30 26	01 00
	Get		BE EF	03	06 00	CC 3D	02 00	30 26	00 00
IR REMOTE FREQ. HIGH	Set	Off	BE EF	03	06 00	03 3C	01 00	31 26	00 00
		On	BE EF	03	06 00	93 3D	01 00	31 26	01 00
	Get		BE EF	03	06 00	30 3C	02 00	31 26	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
LANGUAGE	Set	ENGLISH	BE EF	03	06 00	F7 D3	01 00	05 30	00 00
		FRANÇAIS	BE EF	03	06 00	67 D2	01 00	05 30	01 00
		DEUTSCH	BE EF	03	06 00	97 D2	01 00	05 30	02 00
		ESPAÑOL	BE EF	03	06 00	07 D3	01 00	05 30	03 00
		ITALIANO	BE EF	03	06 00	37 D1	01 00	05 30	04 00
		NORSK	BE EF	03	06 00	A7 D0	01 00	05 30	05 00
		NEDERLANDS	BE EF	03	06 00	57 D0	01 00	05 30	06 00
		PORTUGUÊS	BE EF	03	06 00	C7 D1	01 00	05 30	07 00
		日本語	BE EF	03	06 00	37 D4	01 00	05 30	08 00
		简体中文	BE EF	03	06 00	A7 D5	01 00	05 30	09 00
		繁體中文	BE EF	03	06 00	37 DE	01 00	05 30	10 00
		한글	BE EF	03	06 00	57 D5	01 00	05 30	0A 00
		SVENSKA	BE EF	03	06 00	C7 D4	01 00	05 30	0B 00
		РУССКИЙ	BE EF	03	06 00	F7 D6	01 00	05 30	0C 00
		SUOMI	BE EF	03	06 00	67 D7	01 00	05 30	0D 00
		POLSKI	BE EF	03	06 00	97 D7	01 00	05 30	0E 00
		TÜRKÇE	BE EF	03	06 00	07 D6	01 00	05 30	0F 00
	Get		BE EF	03	06 00	C4 D3	02 00	05 30	00 00
MENU POSITION H	Get		BE EF	03	06 00	04 D7	02 00	15 30	00 00
	Increment		BE EF	03	06 00	62 D7	04 00	15 30	00 00
	Decrement		BE EF	03	06 00	B3 D6	05 00	15 30	00 00
MENU POSITION H Reset	Execute		BE EF	03	06 00	DC C6	06 00	43 70	00 00
MENU POSITION V	Get		BE EF	03	06 00	40 D7	02 00	16 30	00 00
	Increment		BE EF	03	06 00	26 D7	04 00	16 30	00 00
	Decrement		BE EF	03	06 00	F7 D6	05 00	16 30	00 00
MENU POSITION V Reset	Execute		BE EF	03	06 00	A8 C7	06 00	44 70	00 00
BLANK	Set	My Screen	BE EF	03	06 00	FB CA	01 00	00 30	20 00
		ORIGINAL	BE EF	03	06 00	FB E2	01 00	00 30	40 00
		BLUE	BE EF	03	06 00	CB D3	01 00	00 30	03 00
		WHITE	BE EF	03	06 00	6B D0	01 00	00 30	05 00
		BLACK	BE EF	03	06 00	9B D0	01 00	00 30	06 00
	Get		BE EF	03	06 00	08 D3	02 00	00 30	00 00
BLANK On/Off	Set	TURN OFF	BE EF	03	06 00	FB D8	01 00	20 30	00 00
		TURN ON	BE EF	03	06 00	6B D9	01 00	20 30	01 00
	Get		BE EF	03	06 00	C8 D8	02 00	20 30	00 00
START UP	Set	My Screen	BE EF	03	06 00	CB CB	01 00	04 30	20 00
		ORIGINAL	BE EF	03	06 00	0B D2	01 00	04 30	00 00
		TURN OFF	BE EF	03	06 00	9B D3	01 00	04 30	01 00
	Get		BE EF	03	06 00	38 D2	02 00	04 30	00 00
My Screen LOCK	Set	TURN OFF	BE EF	03	06 00	3B EF	01 00	C0 30	00 00
		TURN ON	BE EF	03	06 00	AB EE	01 00	C0 30	01 00
	Get		BE EF	03	06 00	08 EF	02 00	C0 30	00 00
MESSAGE	Set	TURN OFF	BE EF	03	06 00	8F D6	01 00	17 30	00 00
		TURN ON	BE EF	03	06 00	1F D7	01 00	17 30	01 00
	Get		BE EF	03	06 00	BC D6	02 00	17 30	00 00

Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
AUTO SEARCH	Set	TURN OFF	BE EF	03	06 00	B6 D6	01 00	16 20	00 00
		TURN ON	BE EF	03	06 00	26 D7	01 00	16 20	01 00
	Get		BE EF	03	06 00	85 D6	02 00	16 20	00 00
AUTO OFF	Get		BE EF	03	06 00	08 86	02 00	10 31	00 00
	Increment		BE EF	03	06 00	6E 86	04 00	10 31	00 00
	Decrement		BE EF	03	06 00	BF 87	05 00	10 31	00 00
AUTO ON	Set	TURN OFF	BE EF	03	06 00	3B 89	01 00	20 31	00 00
		TURN ON	BE EF	03	06 00	AB 88	01 00	20 31	01 00
	Get		BE EF	03	06 00	08 89	02 00	20 31	00 00
LAMP TIME	Get		BE EF	03	06 00	C2 FF	02 00	90 10	00 00
LAMP TIME Reset	Execute		BE EF	03	06 00	58 DC	06 00	30 70	00 00
FILTER TIME	Get		BE EF	03	06 00	C2 F0	02 00	A0 10	00 00
FILER TIME Reset	Execute		BE EF	03	06 00	98 C6	06 00	40 70	00 00
AUTO KEYSTONE EXECUTE	Execute		BE EF	03	06 00	E5 D1	06 00	0D 20	00 00
AUTO KEYSTONE	Set	TURN OFF	BE EF	03	06 00	EA D1	01 00	0F 20	00 00
		TURN ON	BE EF	03	06 00	7A D0	01 00	0F 20	01 00
	Get		BE EF	03	06 00	D9 D1	02 00	0F 20	00 00
MY BUTTON-1	Set	RGB1	BE EF	03	06 00	3A 33	01 00	00 36	00 00
		RGB2	BE EF	03	06 00	FA 31	01 00	00 36	04 00
		M1-D	BE EF	03	06 00	CA 33	01 00	00 36	03 00
		COMPONENT	BE EF	03	06 00	6A 30	01 00	00 36	05 00
		S-VIDEO	BE EF	03	06 00	5A 32	01 00	00 36	02 00
		VIDEO	BE EF	03	06 00	AA 32	01 00	00 36	01 00
		INFORMATION	BE EF	03	06 00	FA 3E	01 00	00 36	10 00
		AUTO KEYSTONE EXECUTE	BE EF	03	06 00	6A 3F	01 00	00 36	11 00
		MY MEMORY	BE EF	03	06 00	9A 3F	01 00	00 36	12 00
		PICTURE MODE	BE EF	03	06 00	0A 3E	01 00	00 36	13 00
		FILTER RESET	BE EF	03	06 00	3A 3C	01 00	00 36	14 00
		ACTIVE IRIS	BE EF	03	06 00	AA 3D	01 00	00 36	15 00
		e-SHOT	BE EF	03	06 00	5A 3D	01 00	00 36	16 00
		VOLUME +	BE EF	03	06 00	CA 3C	01 00	00 36	17 00
		VOLUME -	BE EF	03	06 00	3A 39	01 00	00 36	18 00
	Get		BE EF	03	06 00	09 33	02 00	00 36	00 00

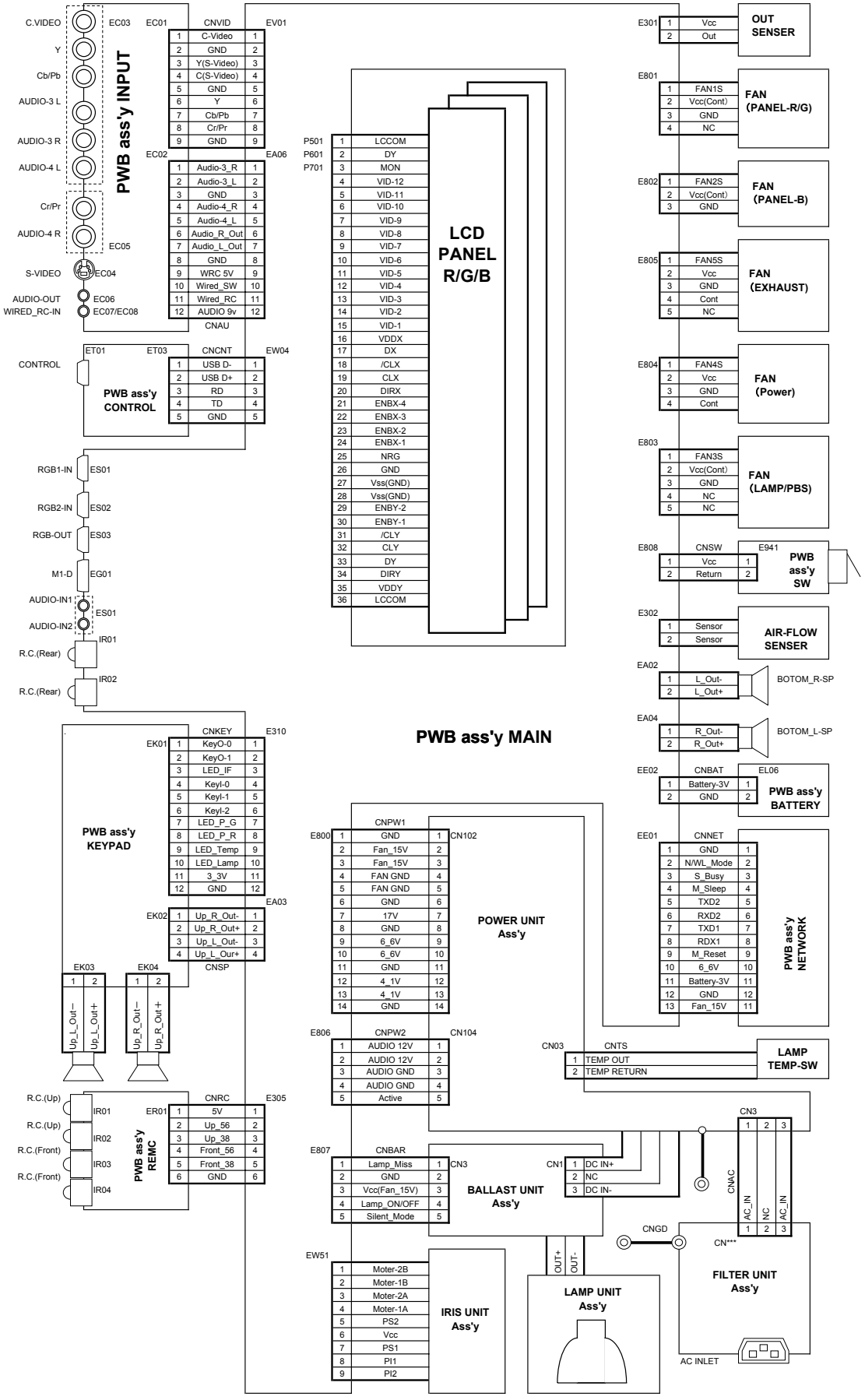
Names	Operation Type		Header			CRC	Command Data		
							Action	Type	Setting Code
MY BUTTON-2	Set	RGB1	BE EF	03	06 00	C6 32	01 00	01 36	00 00
		RGB2	BE EF	03	06 00	06 30	01 00	01 36	04 00
		M1-D	BE EF	03	06 00	36 32	01 00	01 36	03 00
		COMPONENT	BE EF	03	06 00	96 31	01 00	01 36	05 00
		S-VIDEO	BE EF	03	06 00	A6 33	01 00	01 36	02 00
		VIDEO	BE EF	03	06 00	56 33	01 00	01 36	01 00
		INFORMATION	BE EF	03	06 00	06 3F	01 00	01 36	10 00
		AUTO KEYSTONE EXECUTE	BE EF	03	06 00	96 3E	01 00	01 36	11 00
		MY MEMORY	BE EF	03	06 00	66 3E	01 00	01 36	12 00
		PICTURE MODE	BE EF	03	06 00	F6 3F	01 00	01 36	13 00
		FILTER RESET	BE EF	03	06 00	C6 3D	01 00	01 36	14 00
		ACTIVE IRIS	BE EF	03	06 00	56 3C	01 00	01 36	15 00
		e-SHOT	BE EF	03	06 00	A6 3C	01 00	01 36	16 00
		VOLUME +	BE EF	03	06 00	36 3D	01 00	01 36	17 00
		VOLUME -	BE EF	03	06 00	C6 38	01 00	01 36	18 00
	Get		BE EF	03	06 00	F5 32	02 00	01 36	00 00
MAGNIFY	Get		BE EF	03	06 00	7C D2	02 00	07 30	00 00
	Increment		BE EF	03	06 00	1A D2	04 00	07 30	00 00
	Decrement		BE EF	03	06 00	CB D3	05 00	07 30	00 00
FREEZE	Set	NORMAL	BE EF	03	06 00	83 D2	01 00	02 30	00 00
		FREEZE	BE EF	03	06 00	13 D3	01 00	02 30	01 00
	Get		BE EF	03	06 00	B0 D2	02 00	02 30	00 00

11. Block diagram



Block diagram

12. Connector connection diagram

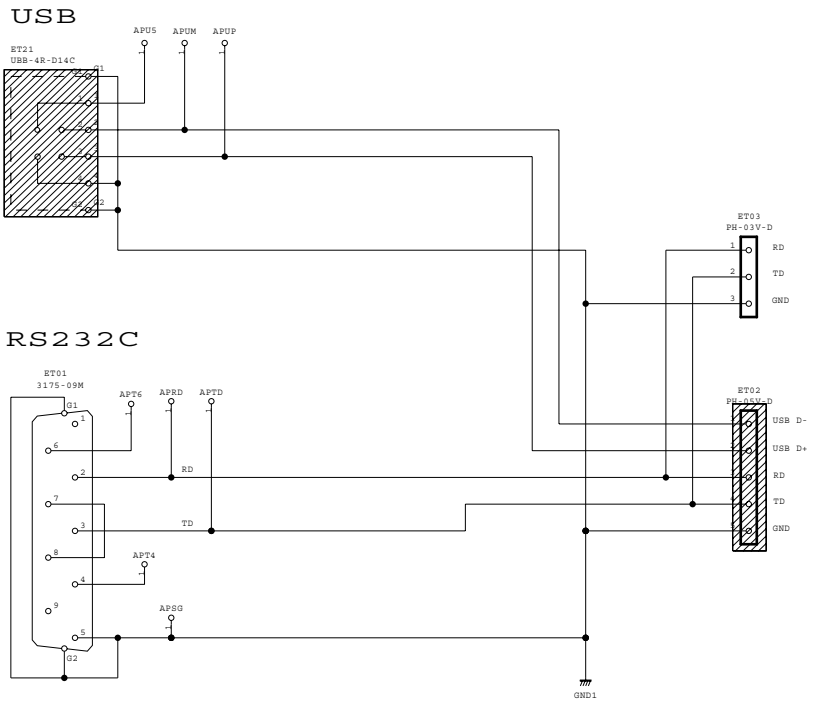


Connector connection diagram

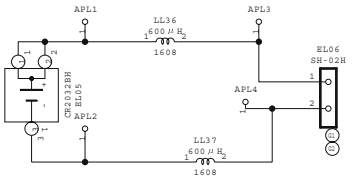
13. Basic circuit diagram

Parts with hatching are not mounted.

CONFIDENTIAL

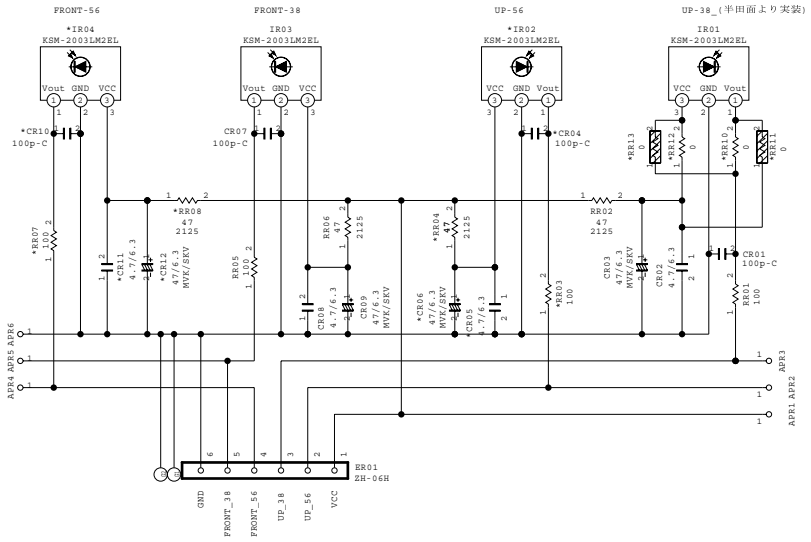


PWB assembly CONTROL (EDX40N)

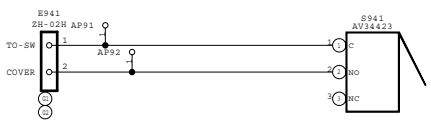


PWB assembly BATTERY (EDX40N)

CONFIDENTIAL



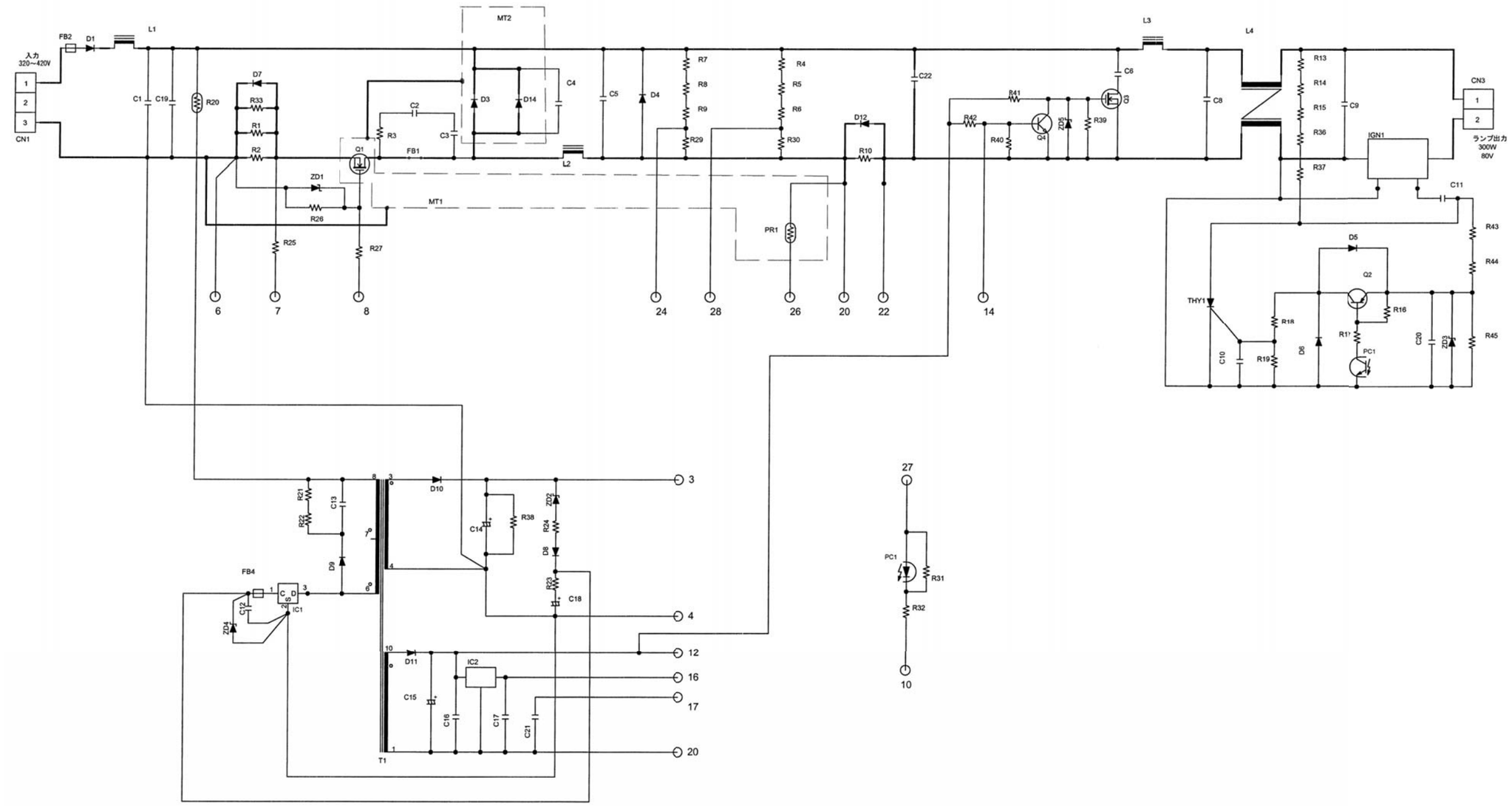
PWB assembly REMOTE (EDX40N)



PWB assembly SW (EDX40N)

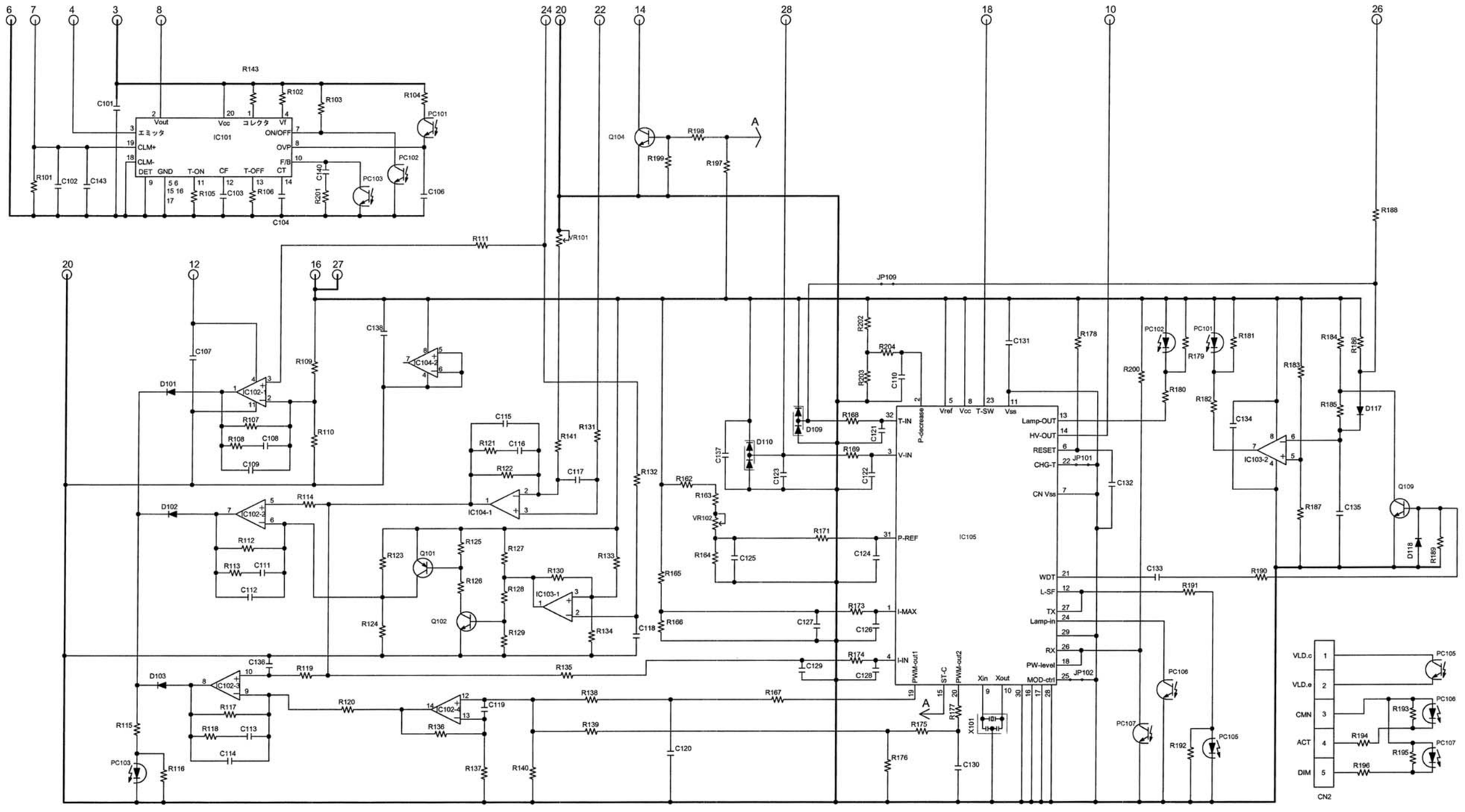
MEMO

CONFIDENTIAL



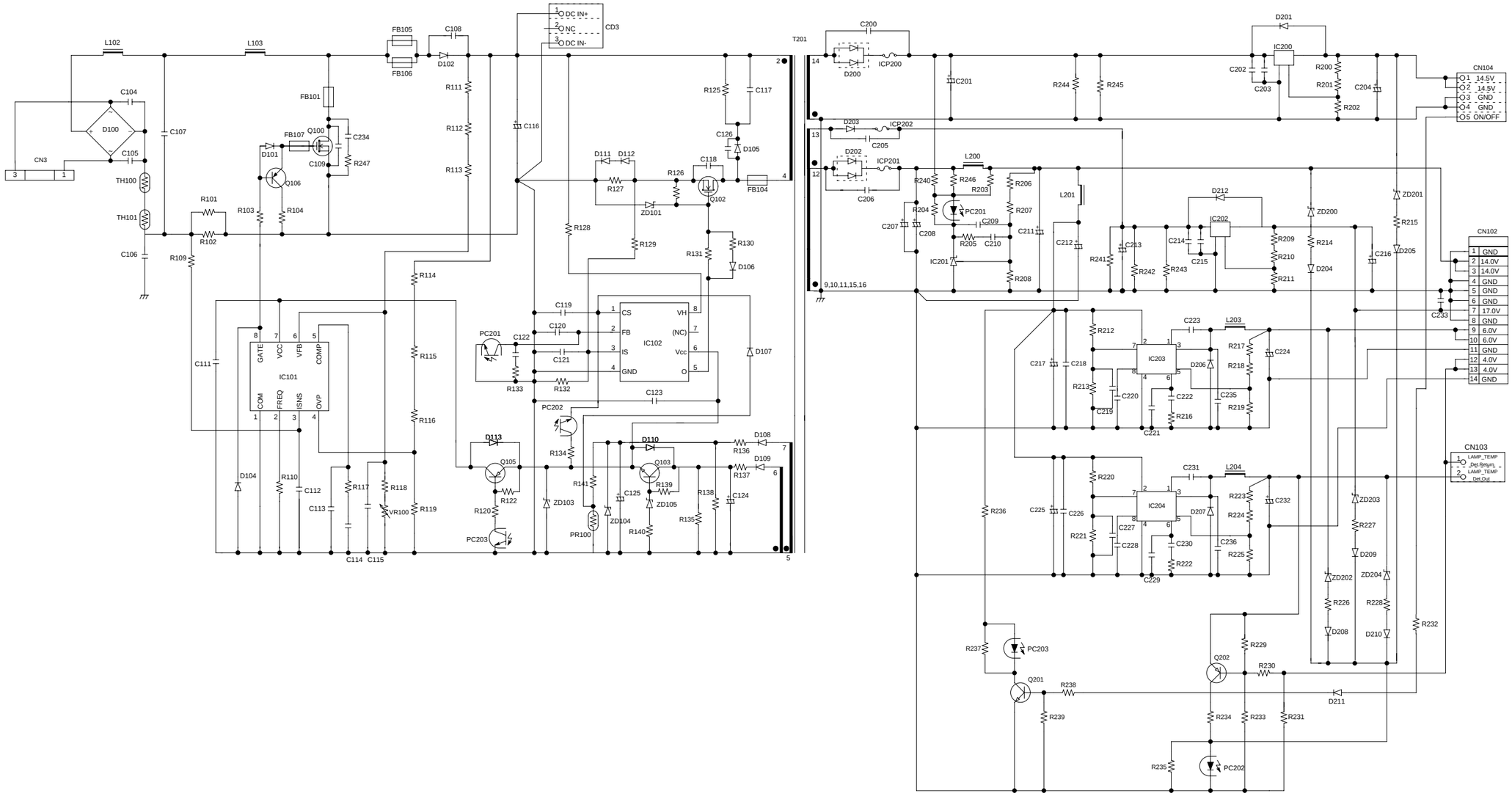
POWER UNIT (BALLAST) 1 (EDX35N)

CONFIDENTIAL



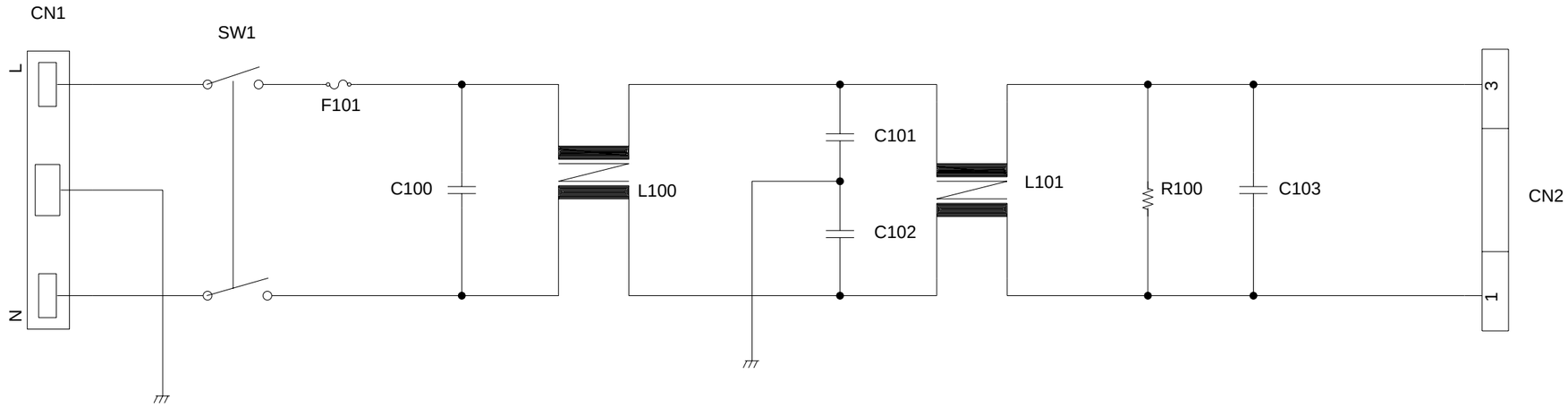
POWER UNIT (BALLAST) 2 (EDX35N)

CONFIDENTIAL



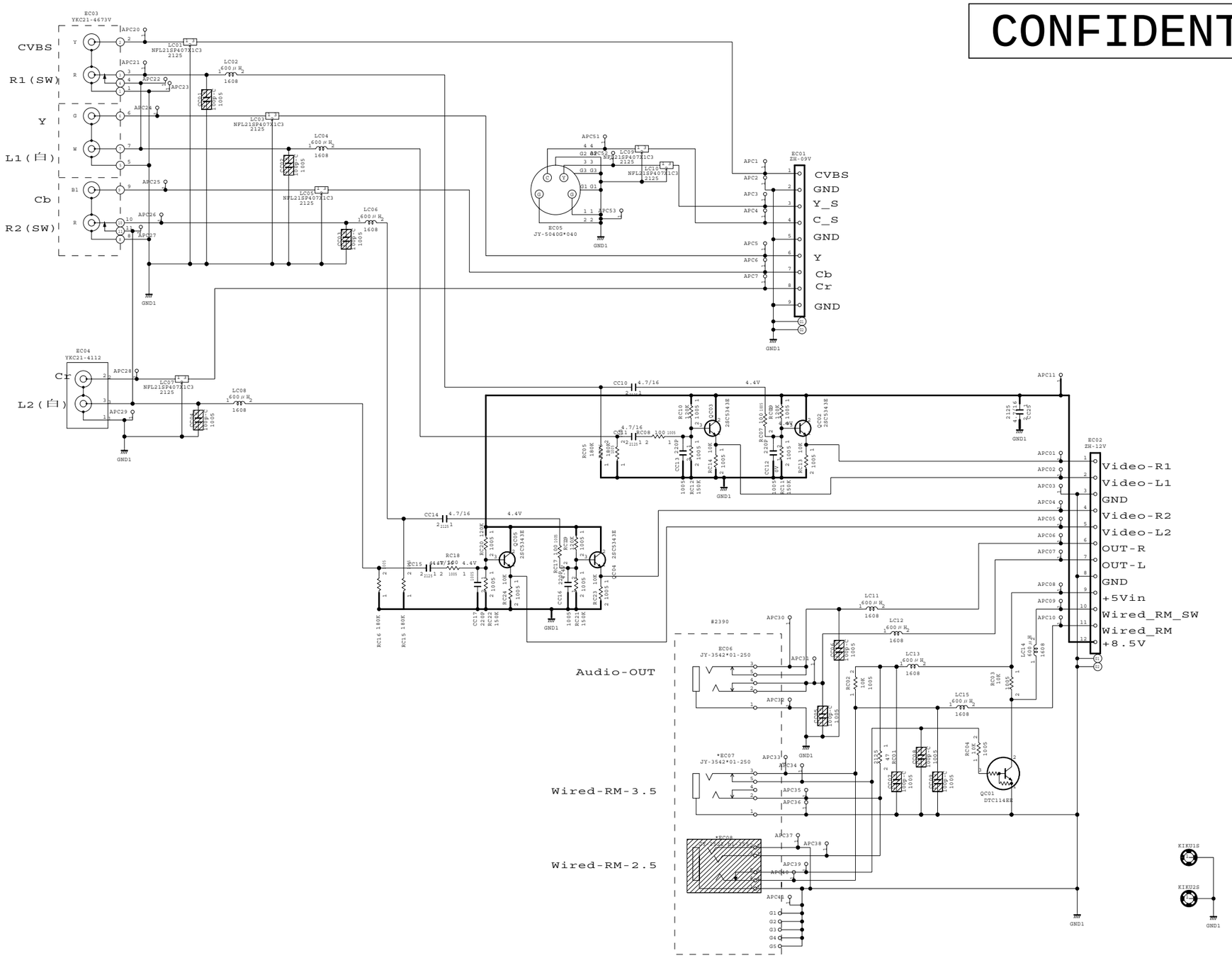
POWER UNIT (CIRCUIT) 1 (EDX35N)

CONFIDENTIAL



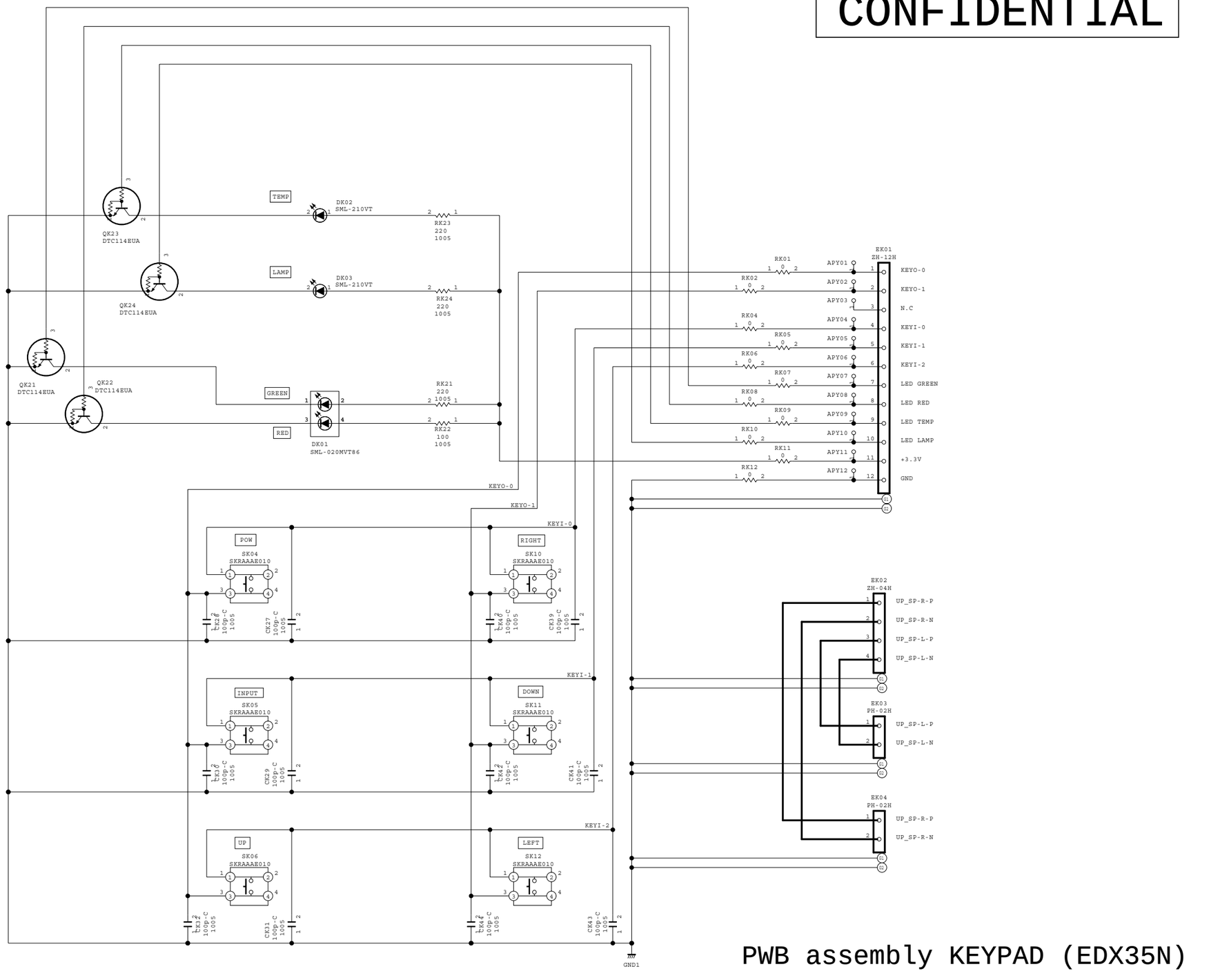
POWER UNIT (CIRCUIT) 2 (EDX35N)

CONFIDENTIAL



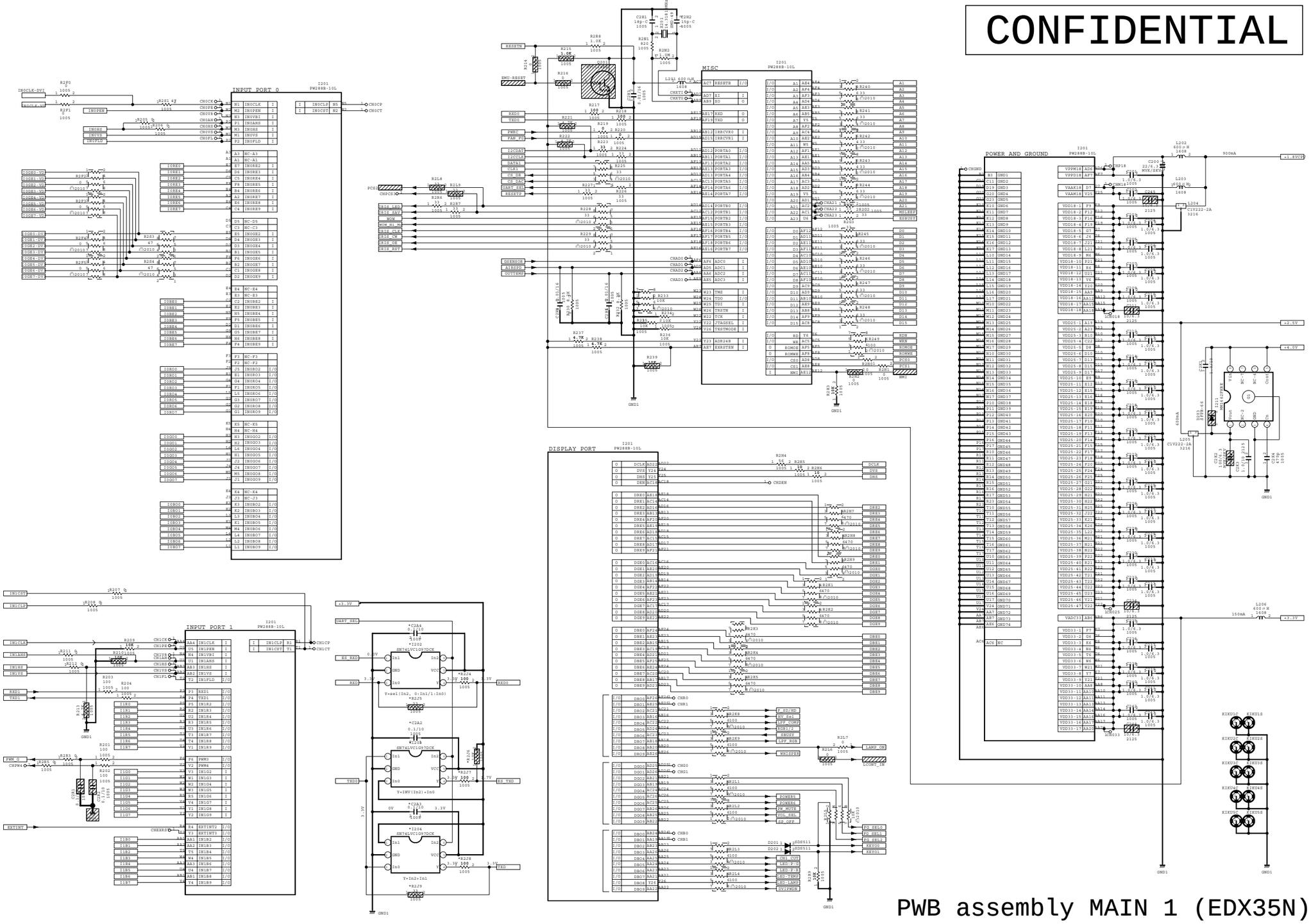
PWB assembly INPUT (EDX35N)

CONFIDENTIAL



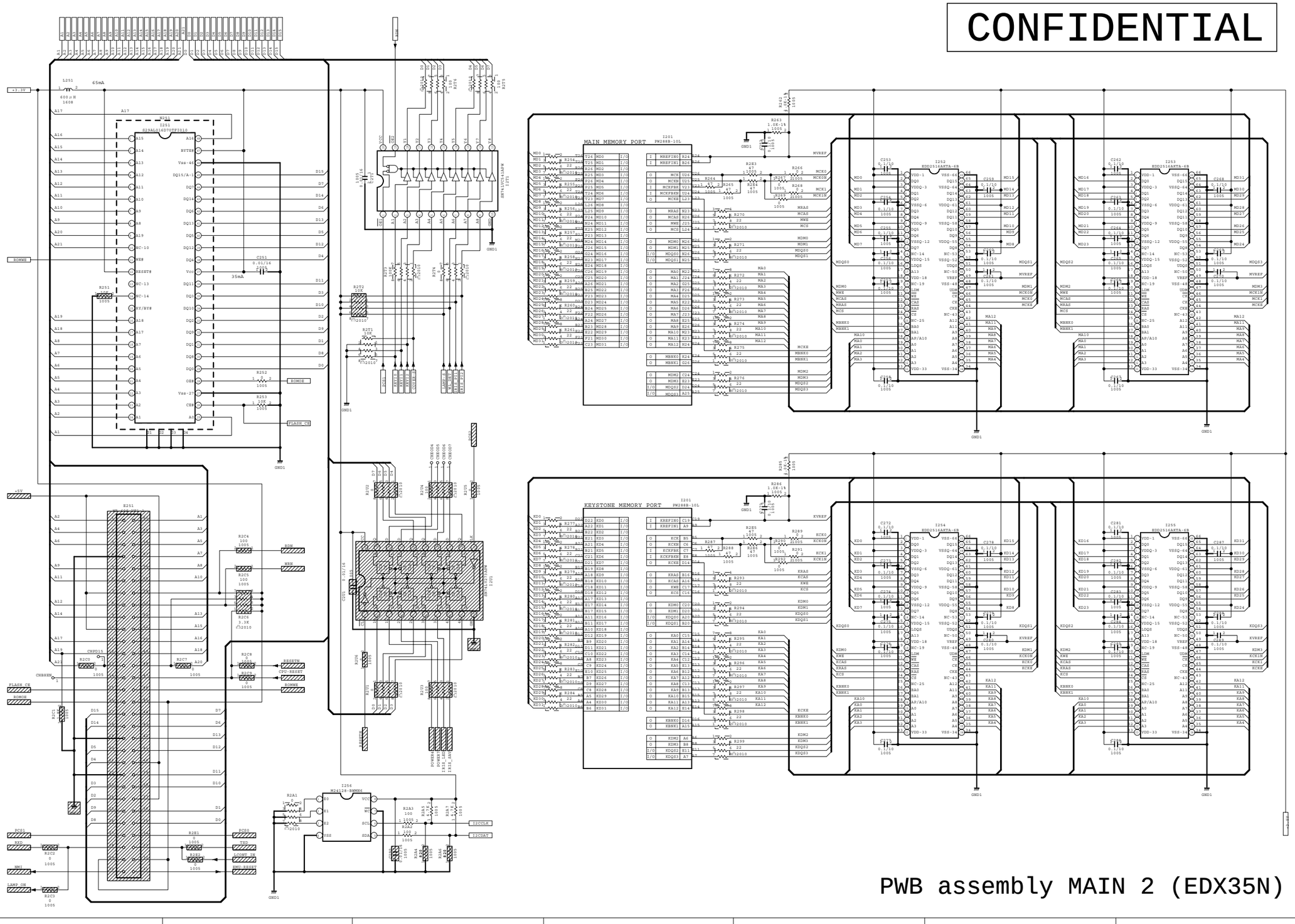
PWB assembly KEYPAD (EDX35N)

CONFIDENTIAL



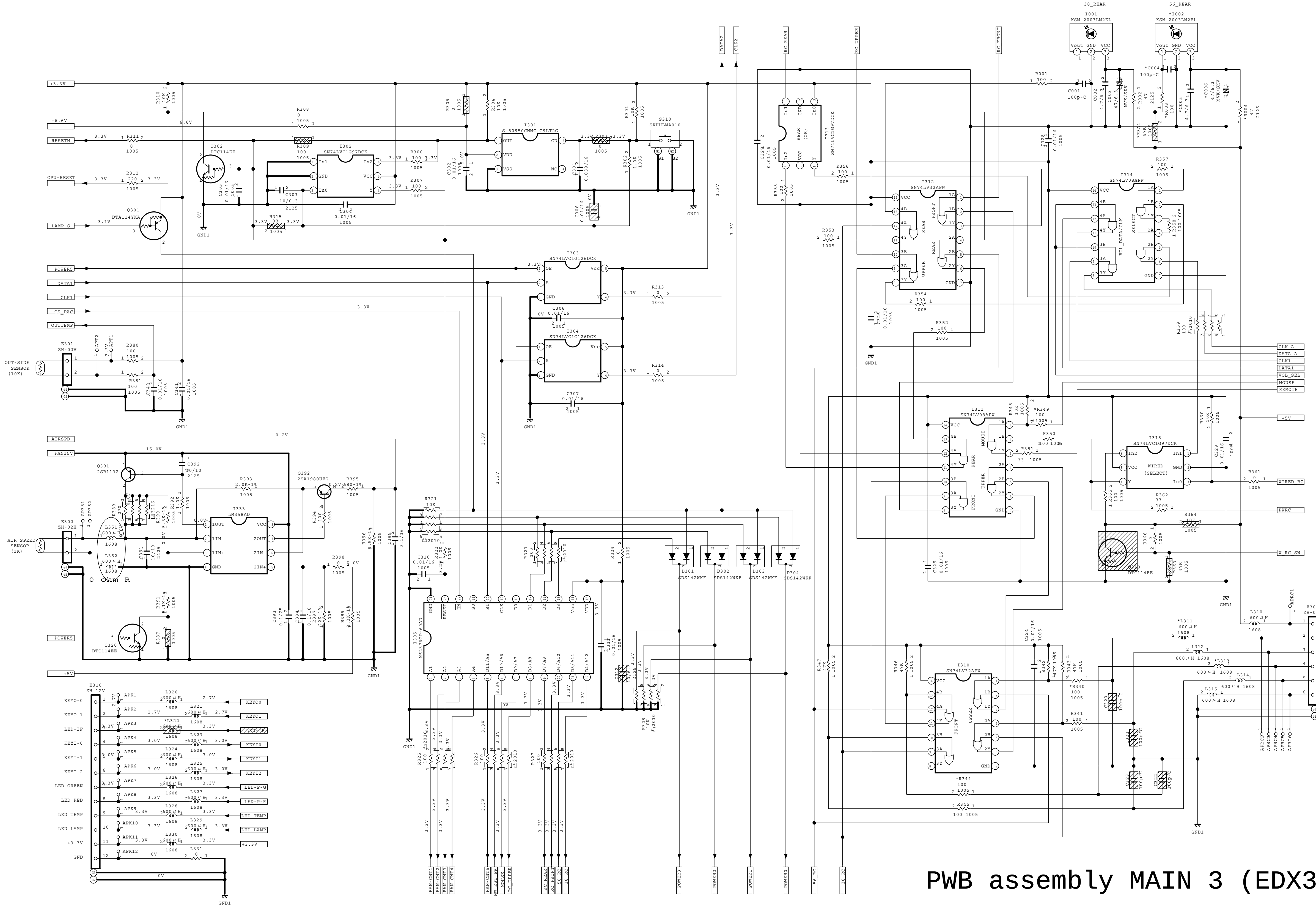
PWB assembly MAIN 1 (EDX35N)

CONFIDENTIAL



PWB assembly MAIN 2 (EDX35N)

CONFIDENTIAL



+3.3V
+6.6V
RESETN
CPU-RESET
LAMP-S
POWER5
DATA1
CLK1
CS_DAC
OUTTEMP
OUT-SIDE SENSOR (10K)
AIRSPD
FAN15V
AIR SPEED SENSOR (1K)
+5V
I301 S-80950CNMC-G9LT2G
I302 SN74LVC1G97DCK
I303 SN74LVC1G126DCK
I304 SN74LVC1G126DCK
I305 M62376GP-60AD
I310 SN74LV32APW
I311 SN74LV08APW
I312 SN74LV32APW
I313 SN74LVC1G97DCK
I314 SN74LV08APW
I315 SN74LVC1G97DCK
I333 LM358AD
I001 KSM-2003LM2EL
*I002 KSM-2003LM2EL
38_REAR
56_REAR
S310 SKHHLMA010
Q301 DTA114YKA
Q302 DTC114EE
Q320 DTC114EE
Q391 2SB1132
Q392 2SA1980UFG
Q310 DTC114EE
D301 SDS142WKF
D302 SDS142WKF
D303 SDS142WKF
D304 SDS142WKF
E301 ZH-02V
E302 ZH-02H
E305 ZH-06V
E310 ZH-12V
DATA2
CLK2
RC_REAR
RC_UPPER
RC_FRONT
CLK-A
DATA-A
VOL_SEL
MOUSE
REMOTE
WIRED_RC
PWRC
W_RC_SW
+5V VCC
UP_56
UP_38
FRONT_56
FRONT_38
GND
KEYO-0
KEYO-1
LED-IF
KEYI-0
KEYI-1
KEYI-2
LED GREEN
LED RED
LED TEMP
LED LAMP
KEYO0
KEYO1
KEYI0
KEYI1
KEYI2
LED-P-G
LED-P-R
LED-TEMP
LED-LAMP
FAN-CNT1
FAN-CNT2
FAN-CNT3
FAN-CNT4
FAN-CNT5
NW_RST_PW
RC_UPPER
RC_REAR
RC_FRONT
56_RC
38_RC
POWER3
POWER2
POWER1
POWER0
GND1
0 Ohm R

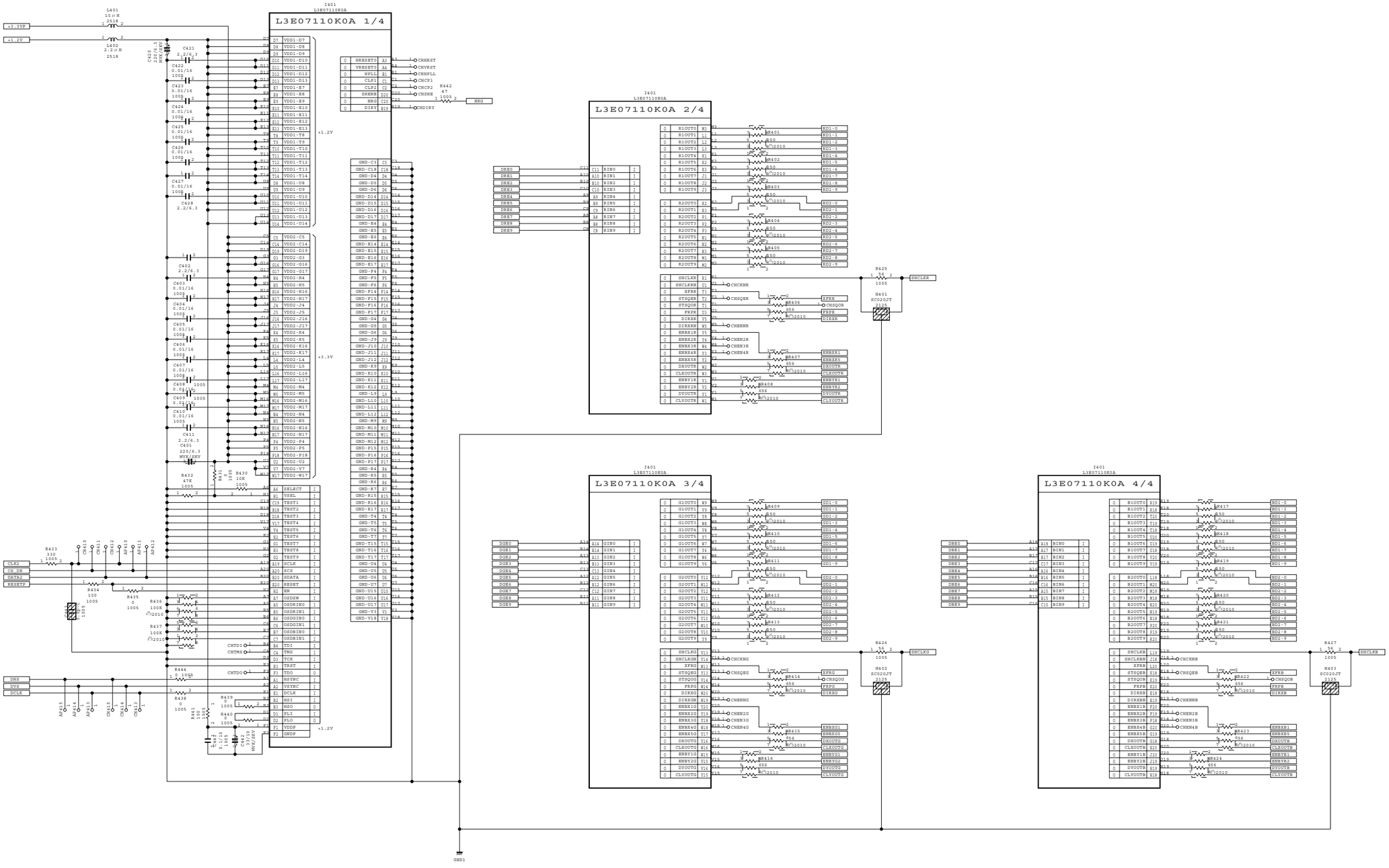
PWB assembly MAIN 3 (EDX35N)

CONFIDENTIAL

FG_SEL			FAN_FG
2	1	0	
L	L	L	PANEL R/G FAN
L	L	H	PANEL B FAN
L	H	L	LAMP/PBS FAN
L	H	H	POWER/BALLAST FAN
H	*	*	LAMP FAN

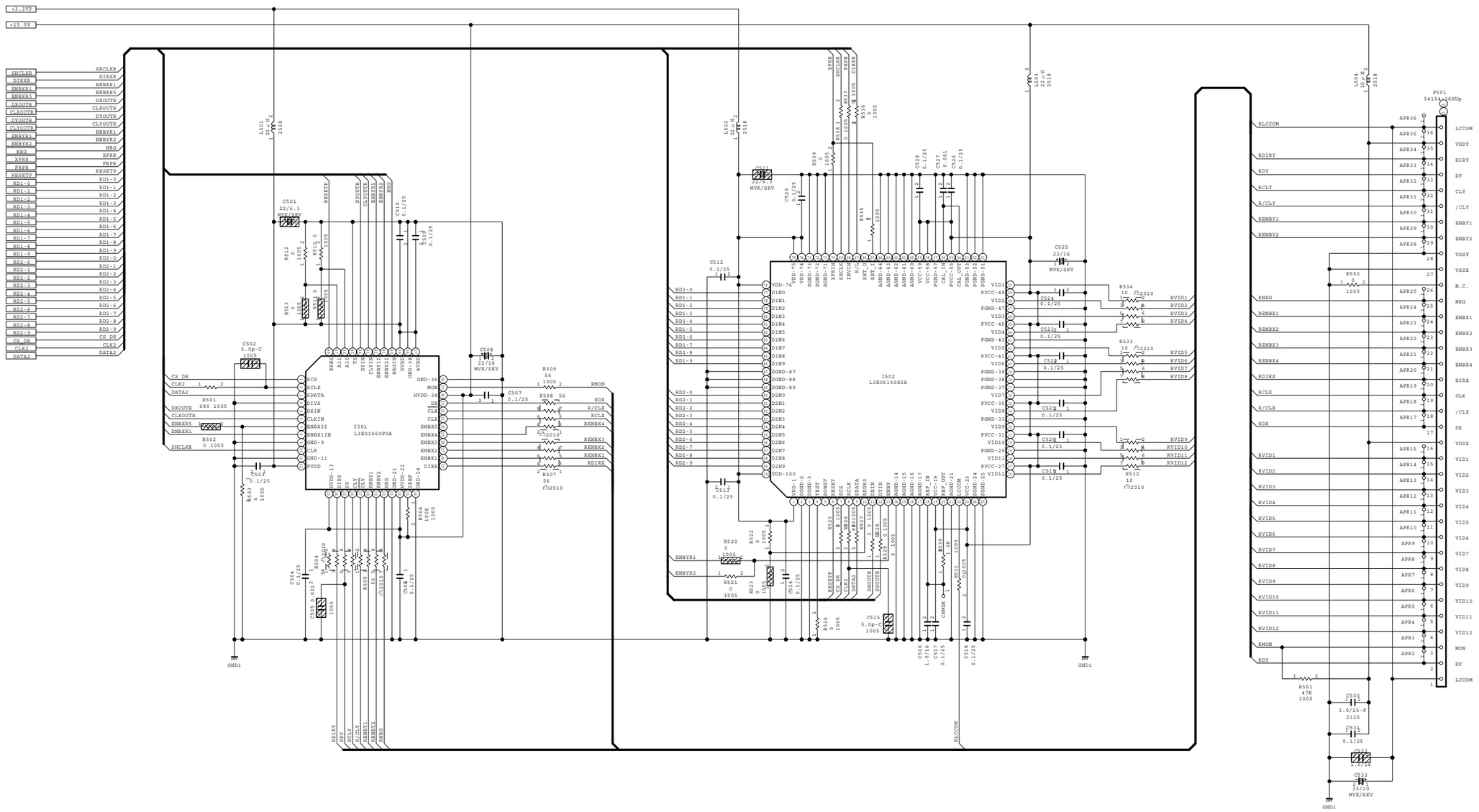
PWB assembly MAIN 4 (EDX35N)

CONFIDENTIAL



CONFIDENTIAL

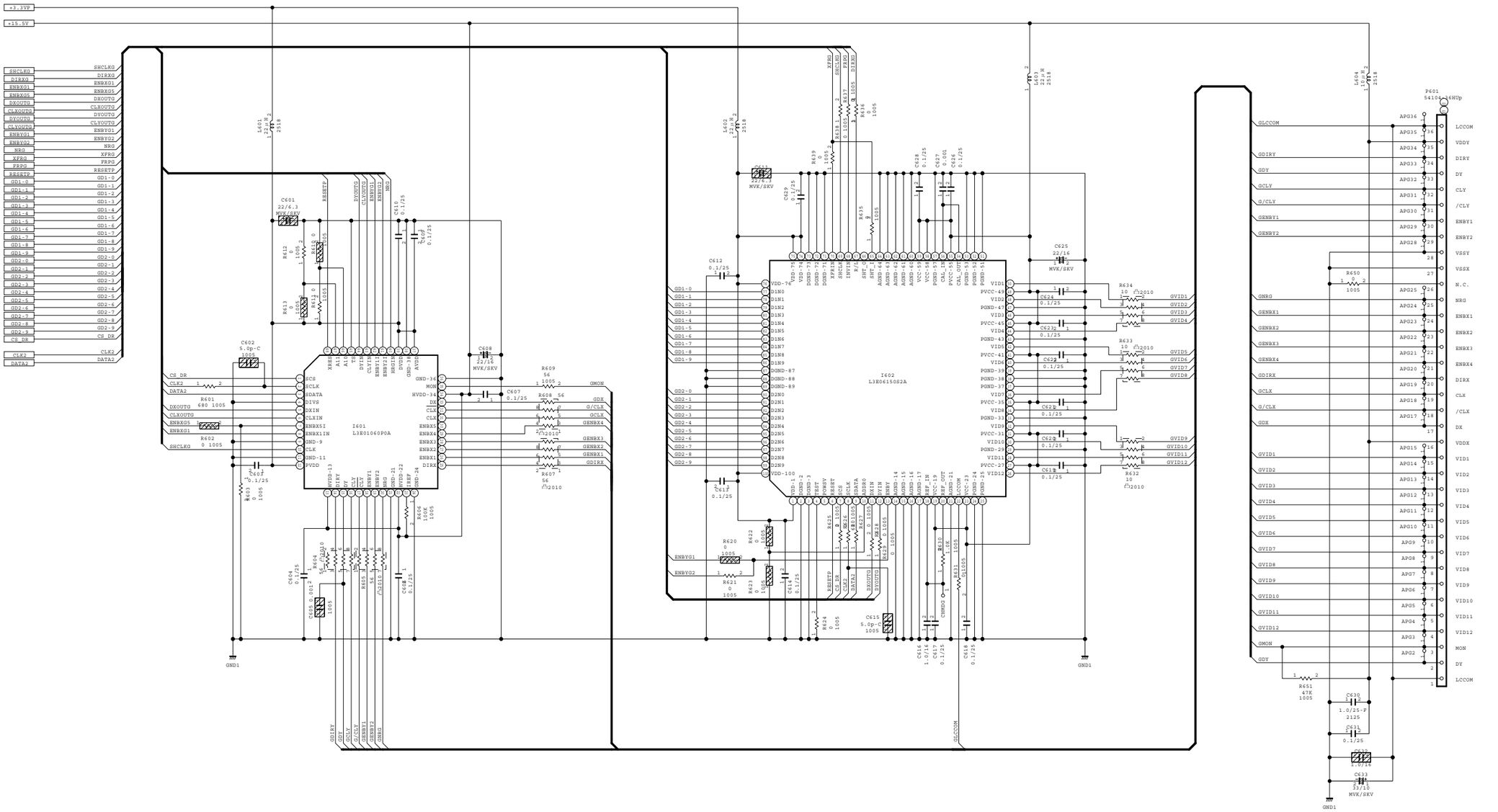
EDX R Panel Part



PWB assembly MAIN 6 (EDX35N)

CONFIDENTIAL

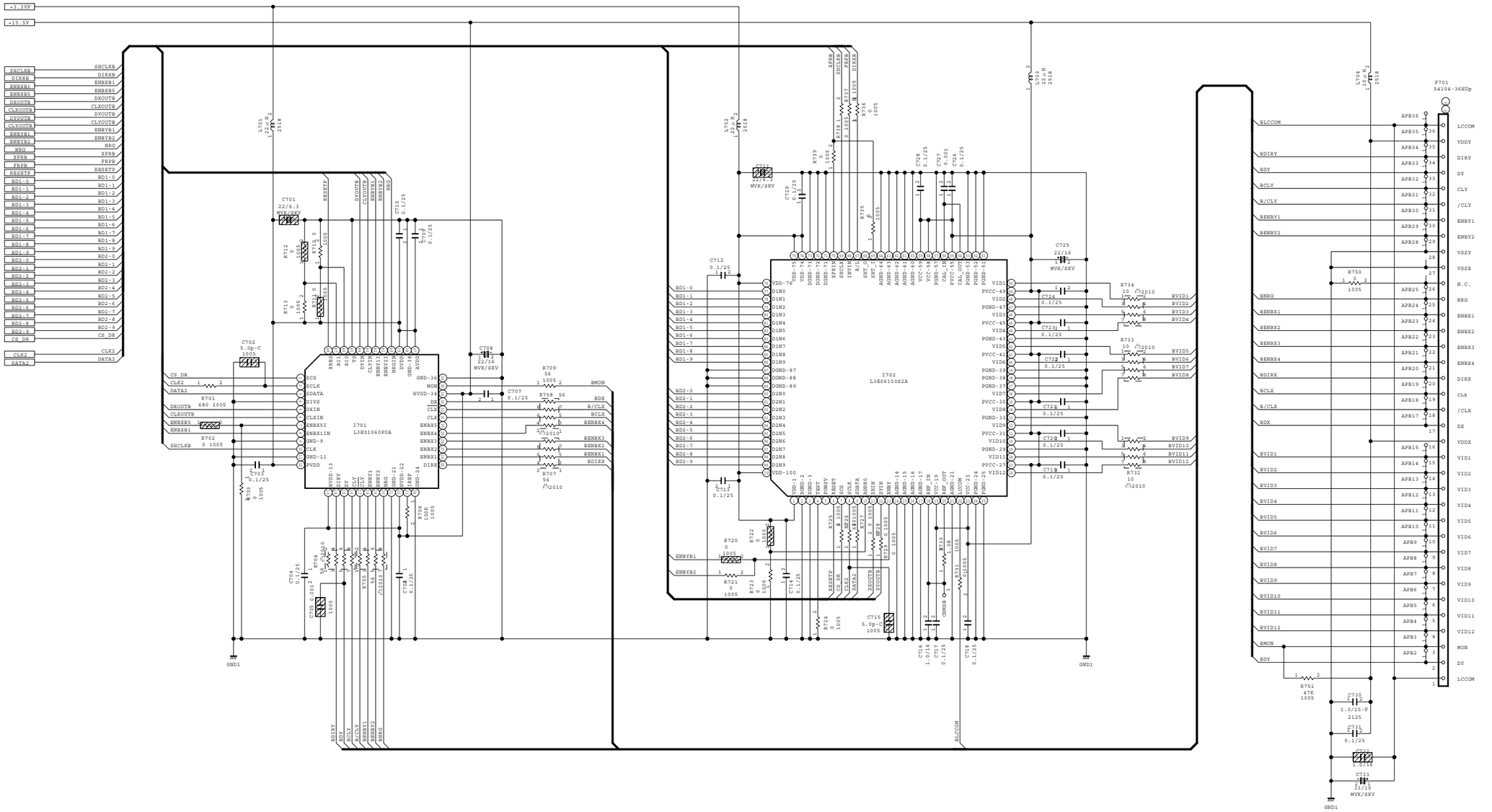
EDX G Panel Part



PWB assembly MAIN 7 (EDX35N)

CONFIDENTIAL

EDX B Panel Part



PWB assembly MAIN 8 (EDX35N)

CONFIDENTIAL

	LPF_RGB
0	LPF OFF
1	LPF ON

	LPF_COMP
0	LPF OFF
1	LPF ON

	HV_Sel
0	Wireless(In1)
1	VideoDecorder(In0)

	F_SD/HD
0	OFF(HD)
1	480i/p,576i/p

B9h/B8h

SOG

SOY

3.3V For Analog 98mA(SXGA75:150MHz)

1.8V For Analog 208mA (SXGA75:150MHz)

3.3V For Digital 68mA

1.8V For Digital 18mA

280mA?

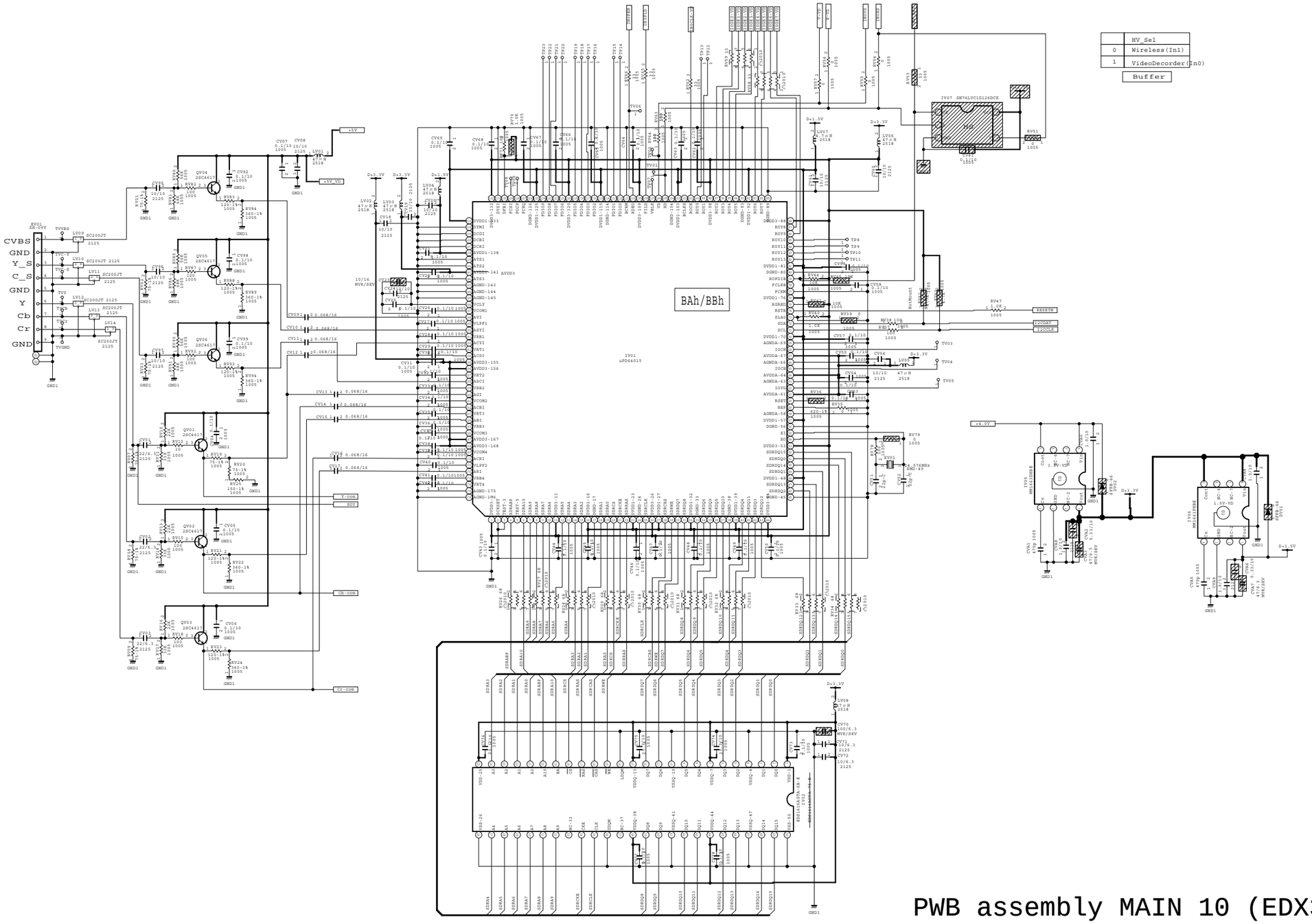
1.8V For PLL

PWB assembly MAIN 9 (EDX35N)

CONFIDENTIAL

	HV_Sel
0	Wireless(In1)
1	VideoDecorder(In0)

Buffer



PWB assembly MAIN 10 (EDX35N)

CONFIDENTIAL

RGB IN 1

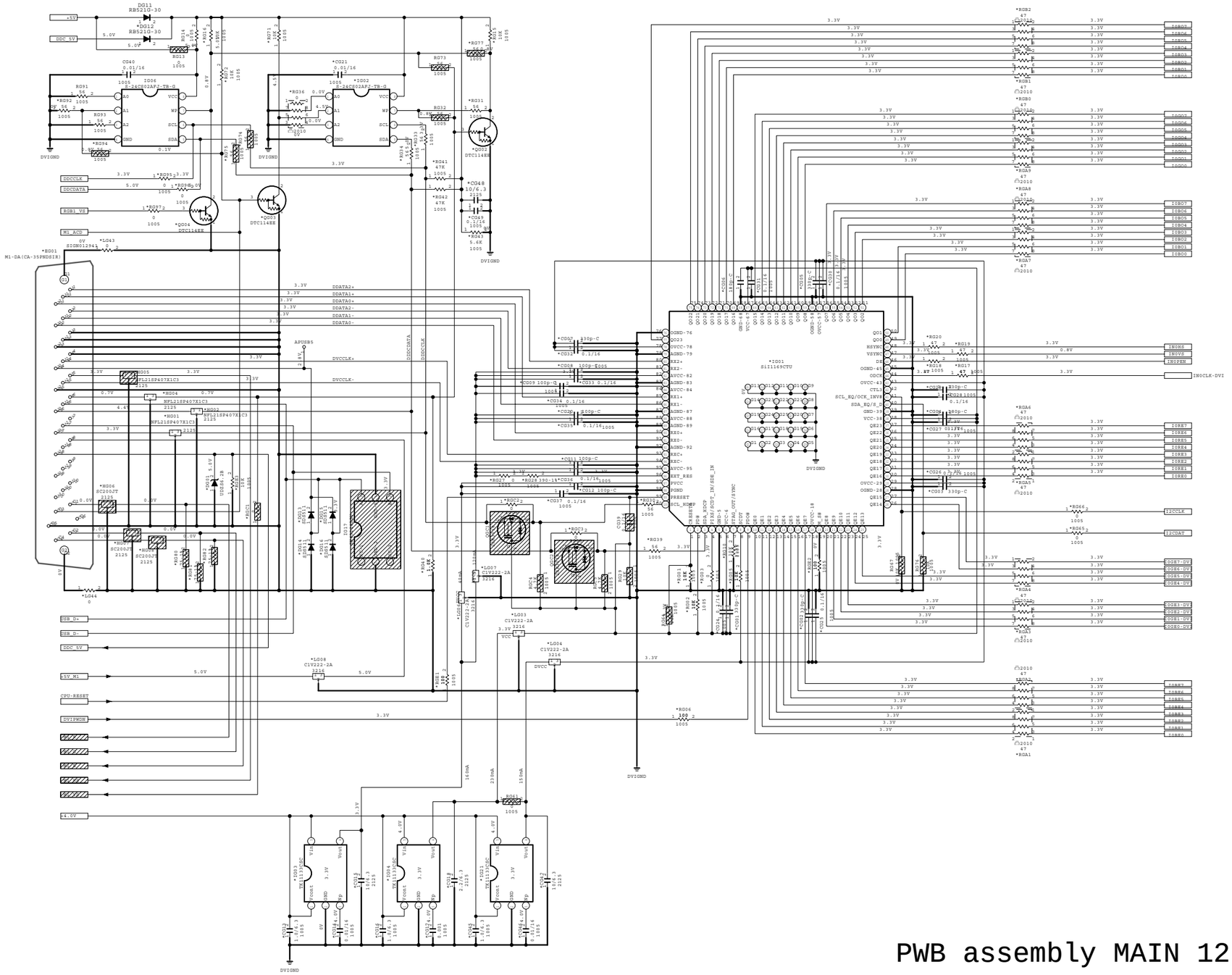
RGB IN 2
For Hitachi Model

M1-A
For InFocus Model

RGB OUT

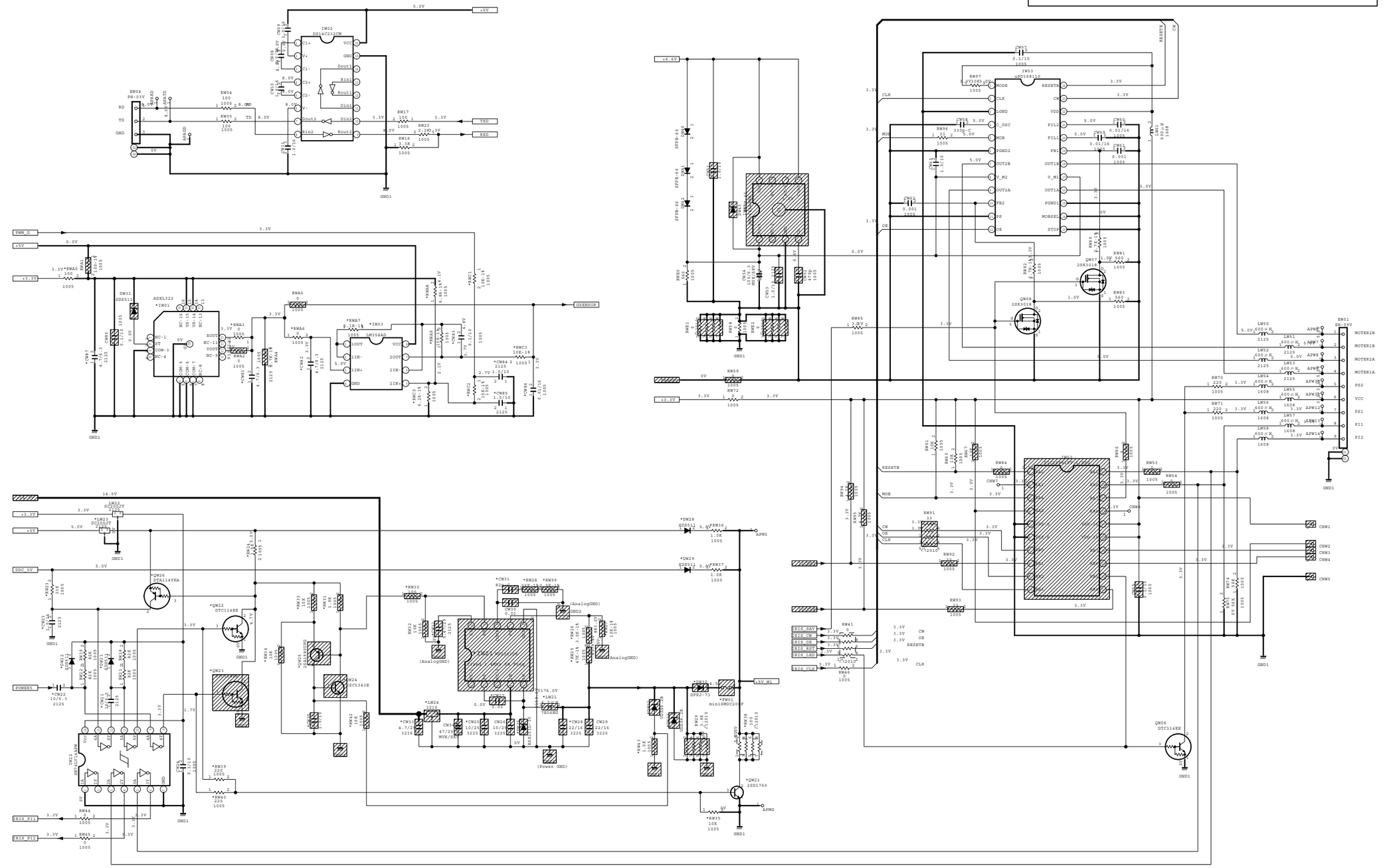
PWB assembly MAIN 11 (EDX35N)

CONFIDENTIAL



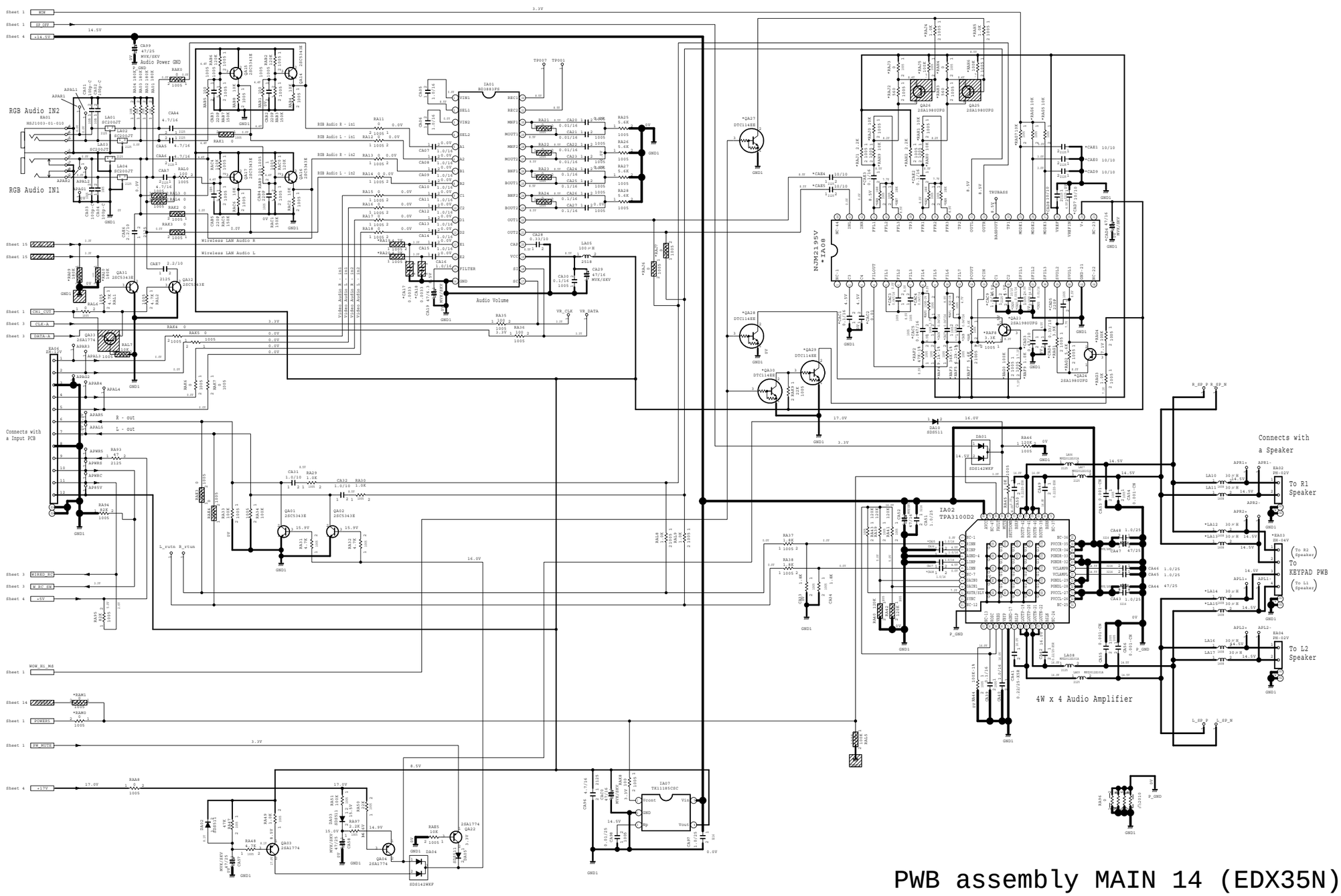
PWB assembly MAIN 12 (EDX35N)

CONFIDENTIAL



PWB assembly MAIN 13 (EDX35N)

CONFIDENTIAL



PWB assembly MAIN 14 (EDX35N)

CONFIDENTIAL

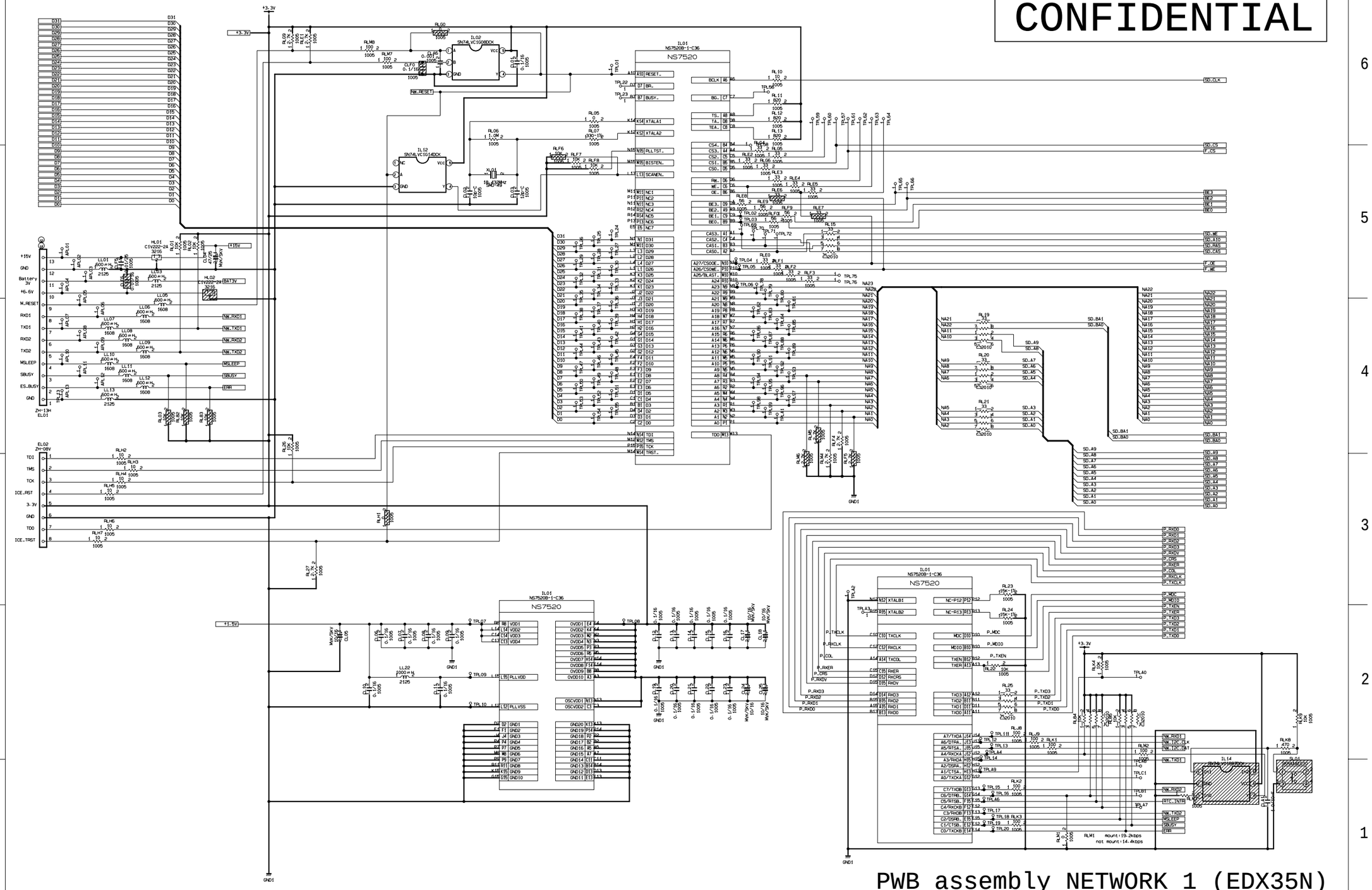
ID0	ID1	
L	L	Hitachi
L	L	I/F
H	L	ASK_Proxima
L	H	Reserved(I/F)
H	H	Reserved(I/F)

RE71,RE72,RE73,RE74 put side-B (soldering side)

RE65 and RR69 put near EE01
connect thick pattern to EE01

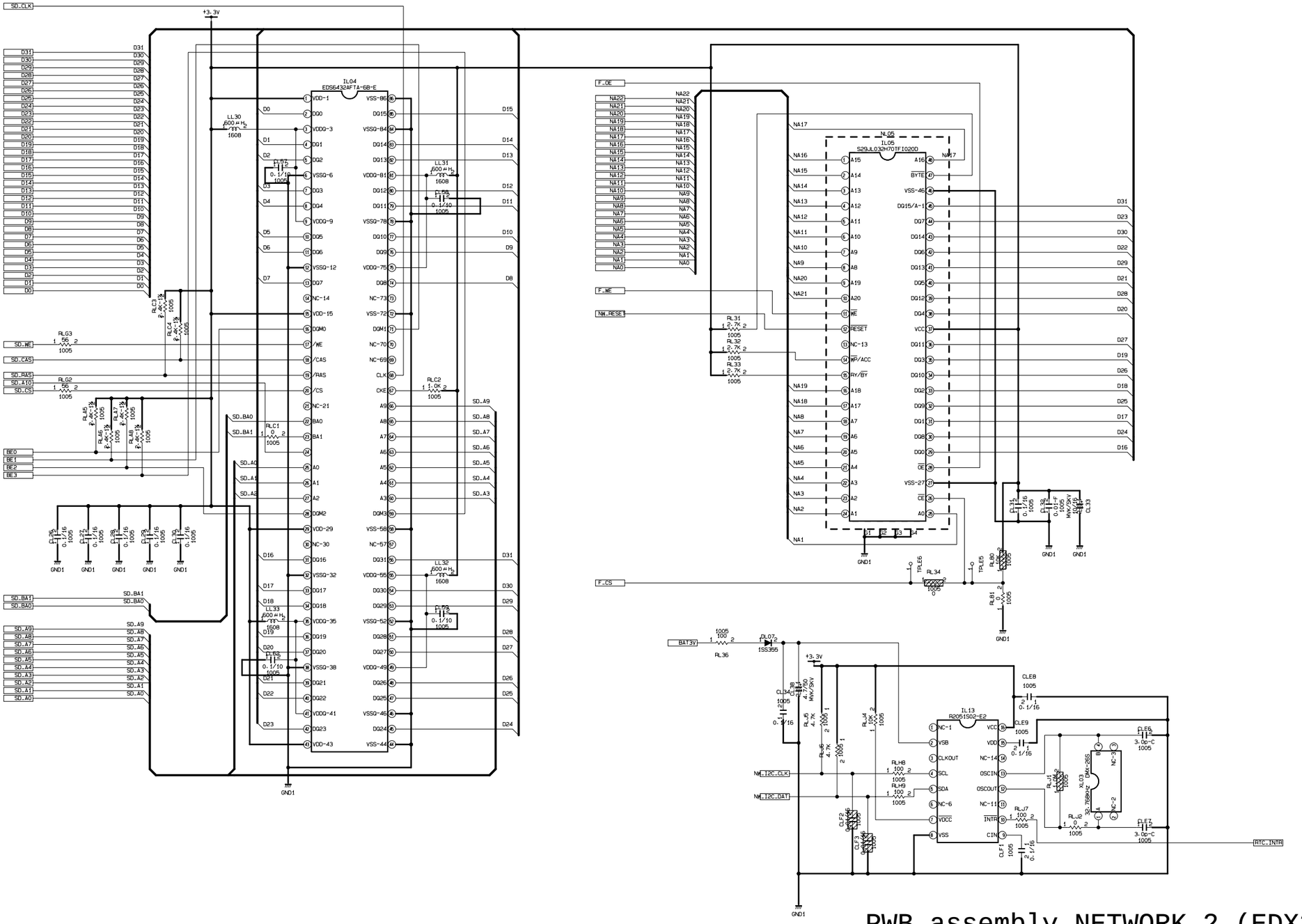
PWB assembly MAIN 15 (EDX35N)

CONFIDENTIAL



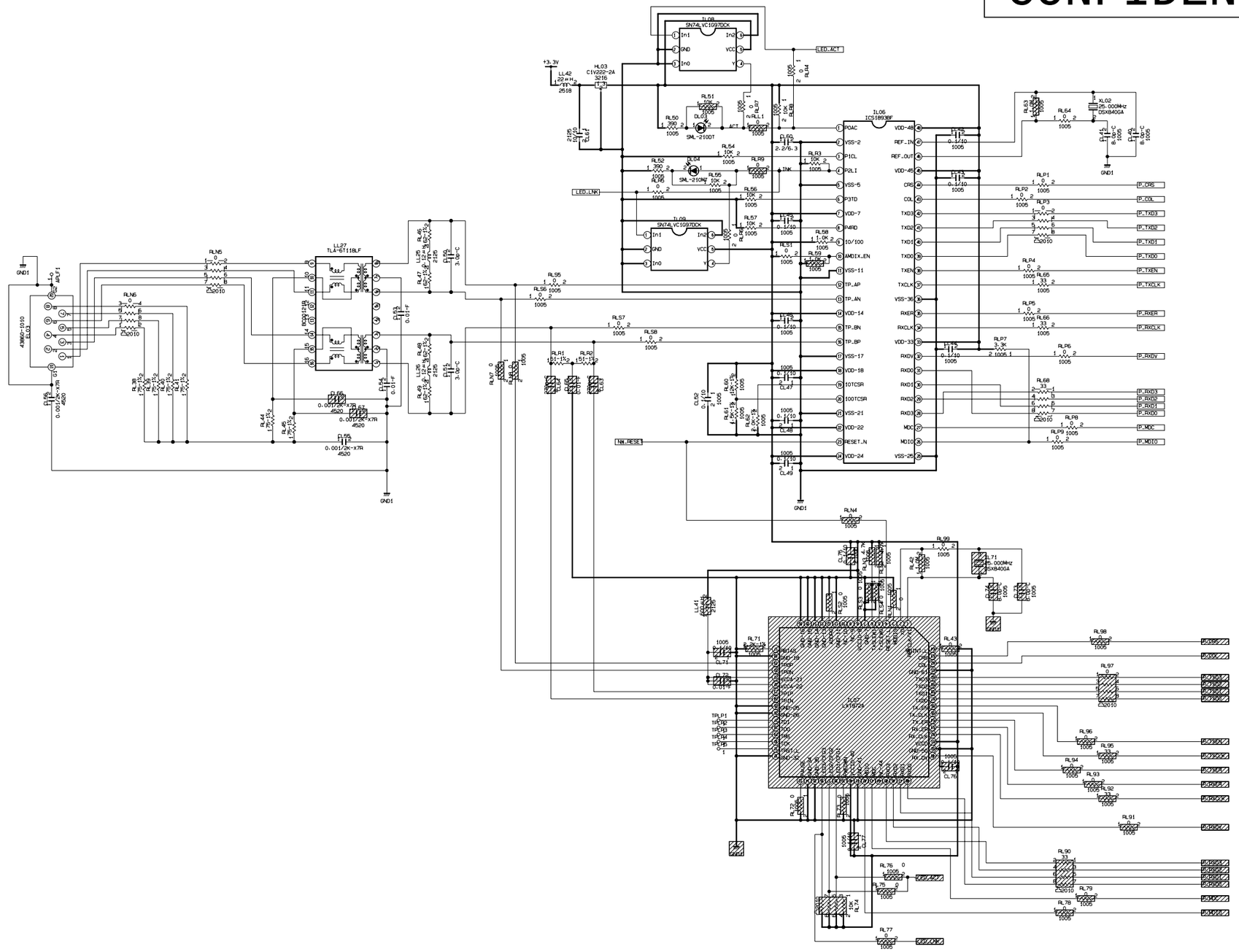
PWB assembly NETWORK 1 (EDX35N)

CONFIDENTIAL



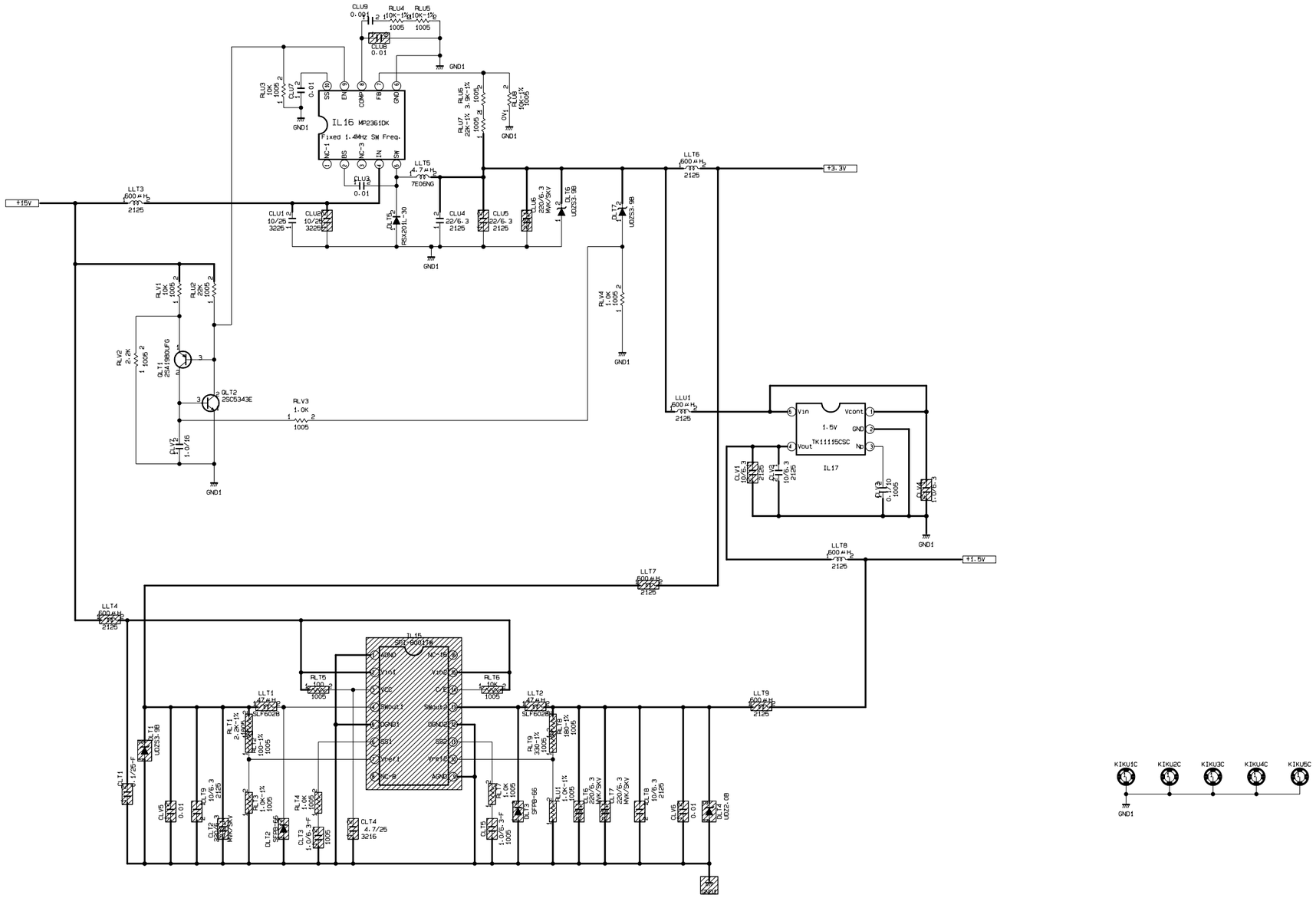
PWB assembly NETWORK 2 (EDX35N)

CONFIDENTIAL



PWB assembly NETWORK 3 (EDX35N)

CONFIDENTIAL



PWB assembly NETWORK 4 (EDX35N)

MEMO

Basic circuit diagram list

PWB assembly CONTROL
PWB assembly BATTERY
PWB assembly REMOTE
PWB assembly SW
POWER UNIT BALLAST 1
POWER UNIT BALLAST 2
POWER UNIT CIRCUIT 1
POWER UNIT CIRCUIT 2
PWB assembly INPUT
PWB assembly KEYPAD
PWB assembly MAIN 1
PWB assembly MAIN 2
PWB assembly MAIN 3
PWB assembly MAIN 4
PWB assembly MAIN 5
PWB assembly MAIN 6
PWB assembly MAIN 7
PWB assembly MAIN 8
PWB assembly MAIN 9
PWB assembly MAIN 10
PWB assembly MAIN 11
PWB assembly MAIN 12
PWB assembly MAIN 13
PWB assembly MAIN 14
PWB assembly MAIN 15
PWB assembly NETWORK 1
PWB assembly NETWORK 2
PWB assembly NETWORK 3
PWB assembly NETWORK 4

HITACHI

CP-X505 **YK No.0577E**

QR70101 Printed in Japan (JE)